

County Borough



of Blackburn.

ANNUAL REPORT

UPON THE

Health of Blackburn

For the Year 1912,

BY

ALFRED GREENWOOD, M.D., B.Sc., D.P.H.,
BARRISTER-AT-LAW.

MEDICAL OFFICER OF HEALTH, MEDICAL SUPERINTENDENT TO
THE INFECTIOUS DISEASES HOSPITALS, AND SCHOOL MEDICAL
OFFICER.

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Corporation of Blackburn.



MEMBERS OF THE HEALTH COMMITTEE.



THE MAYOR (*Alderman S. Crossley*).

ALDERMEN :

GARSDEN (<i>Chairman</i>).	SHORROCK.
NEWTON.	RAMSAY.
WATSON.	

COUNCILLORS :

BOLTON.	ISHERWOOD.
JOHNSON.	POLLARD.
KEIGHLEY.	LEIGHTON.
TAYLOR.	GREEVES (<i>Vice-Chairman</i>).
HALL.	HIGHAM.
FIELDING.	WAREING.
HEATLEY.	BROWNLEE.

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The Local Government Board Tables, and the Classification of all Deaths in the Borough are appended to this Report.

Statistical Summary for 1912.



Area of Borough	7,418 acres.
Population at Census, 1911	133,052
Estimated Population to Middle of 1912	133,539
Average Number of Persons per acre	18.0
Birth-Rate per 1,000 living	20.4
Death-rate ,, 	14.4
Death-Rate from Zymotic Diseases	1.0
Infant Mortality per 1,000 Births	119.2
Total Occupied Houses at 1911 Census	30,648
Plans of New Dwelling-houses Passed	191
Rateable Value	£557,583

Staff of the Health Department.

Medical Officer of Health and School Medical Officer.

ALFRED GREENWOOD, M.D., B.Sc., D.P.H.

Assistant Medical Officer of Health.

J. D. BUCHANAN, M.B., D.P.H.

Assistant School Medical Officer.

S. F. LINTON, M.B., D.P.H. (resigned January, 1913).

Veterinary Inspector and Chief Meat Inspector.

J. R. HAYHURST, M.R.C.V.S. (resigned February, 1913).

Assistant Meat Inspector.

*W. H. GOODMAN.

Chief Sanitary Inspector.

*JAMES GRAHAM.

Special Inspector for Food and Drugs, &c.

*O. H. WILLIAMS.

Special Inspector for Factories and Workshops.

*H. KENYON.

Special Inspector for Drainage Work.

*A. LEES.

District Inspectors.

T. HAWORTH *J. W. MARGINSON. *W. WALNE.

*W. E. GREENWOOD.

Lady Sanitary Inspectors.

*Miss ST. STEPHENS. *Miss LOWE. *Miss MILES.

*Miss REDDOCK (resigned December, 1912).

School Nurses.

*Miss BARTON. Miss EVANS.

Chief Clerk.

THOMAS FOWLER.

Clerks.

H. PEMBERTON. E. SEFTON. T. PICKERING.

J. HARGREAVES.

Disinfectors.

J. W. JOHNSON. *WALTER BENNETT. E. HODGSON.

*Holders of the Royal Sanitary Institute Certificates.

Public Health Office,

Blackburn,

February 22nd, 1913.

*To the Chairman and Members of the Health Committee of
the County Borough of Blackburn.*

Mr. Chairman and Gentlemen,

I have the honour to submit to you, in accordance with the regulations of the Local Government Board, my eleventh Annual Report on the Health and Sanitary Condition of the Borough for the year ending December 31st, 1912.

The Report contains the Vital and Mortal Statistics, the measures adopted for the prevention of disease, and the work carried out by the Public Health Department generally.

As this is the last Annual Report which I shall present to you, I take the opportunity of thanking you for the great encouragement and support which you have always given to me so unstintingly.

I should also like to express my deep gratitude to my brother officials—the Heads of other Departments—for their constant advice and valuable help, and to the Medical Practitioners of the Borough for their loyal co-operation, on all occasions.

Finally, I am equally grateful to my own staff, medical, inspectorial, and clerical, for their willing and zealous support of me during my term of office, and without which it would not be possible to record so many satisfactory features as are set forth in this Report.

I am,

Mr. Chairman and Gentlemen,

Your obedient servant,

ALFRED GREENWOOD.

REPORT

OF THE

Medical Officer of Health

FOR 1912.

Blackburn is situated chiefly in the valley of the Blackewater, and to a much smaller extent in the valley of the Darwen.

The following are the heights above sea-level in various parts of the town :—

Town Hall	377 feet.
Revidge	715 „
Witton	318 „
Intack	483 „
Infirmary	402 „
Station	360 „
Fever Hospital	560 „

The rivers join on the western boundary of the Borough. On the north side of the Blackewater the land rises after the first few hundred yards rapidly from a height of about 300 feet to a height of 700 feet. To the south and west of the River Darwen there is also a fairly rapid rise from a height of 300 feet to 600 feet. The land between the two rivers has at first no great inclination, but towards the south-east it rises rapidly to a height of 650 feet. On the north side the gradients are as high in one or two instances as 1 in 7, and 1 in 10 or 12 are not uncommon. On the south side the steepest slope is 1 in 10. The fall of the valley of the Blackewater is 86 feet in $2\frac{1}{4}$ miles, or 1 in 138.

With few exceptions the falls in the town may be considered good. The deep strata underlying the town are principally the Lower Coal Measures or Gannister Beds. There is a narrow strip of Alluvium in the valley of the Darwen, and Millstone Grit (rock and shale) comes to the surface on the northern side of the borough over a considerable area, and to a very small extent on the southern side. The Gannister Beds underlie nearly the whole of the town proper, and those parts which have Millstone Grit for their deep strata are chiefly agricultural land. With one or two small exceptions the deep strata are covered with drift beds. Throughout the greater part of the Borough the drift beds are principally composed of clay. There is, however, a considerable piece of land in the centre of the town covered with a good depth of pure sand. I cannot map it out correctly, but it includes the land on which the Town Hall, the Market House, the Parish Church, and the Railway Station are built. It extends northwards as far as Regent Street and Richmond Terrace. To the west it extends as a narrow elongated strip as far as Witton Stocks.

The sand varies considerably in its purity in different localities. In the neighbourhood of Church Street, Mincing Lane, Weir Street, Clayton Street, and King Street, it is of a clean reddish colour, and reaches, in some instances, to a depth of 15 to 20 feet, or possibly more. In the neighbourhood of Galligreaves Street and between Galligreaves Street and Whalley Banks, the sand was originally overlaid with a varying thickness of clay, but this was mostly removed before the land was built upon. To the south of Bank Top and Redlam the subsoil is composed mostly of a mixture of sand, gravel, and clay, whilst to the north of Bank Top and Redlam, as far as the River Blakewater, the subsoil is much purer sand. Over the remainder of the town the drift beds are mostly clay, or clay and gravel.

Millstone Grit comes to the surface along Revidge Road, and to some extent on both sides of the road, but principally to the south. The deep strata are of interest chiefly from the

water which is derived from them. The superficial strata or drift beds which form the subsoil are of great importance. Upon its character the dryness of the locality depends to a great extent, and frequently the dryness of the houses built upon it. It has also a very distinct bearing upon all diseases which are due to soil pollution, and also upon those diseases which are due to damp and cold.

POPULATION.

The correct population of the County Borough of Blackburn, taken at the Census of 1911, was 133,052, of which 61,788 were males and 71,264 were females.

The population at the 1901 Census, given by the Registrar-General in his Report, was 129,216, which includes that portion of the Borough added in November, 1901.

This gives an increase during the 10 years of 2.9 per cent., and is the lowest increase that has ever been recorded in Blackburn.

The Report containing the Ward populations has been issued by the Registrar General, but the Report containing particulars of age and sex distribution is not yet to hand, so that it is only possible to refer to the populations of the Wards.

It will be observed that all the Wards on the outskirts of the Borough have increased in population, whilst those on the inside of the Borough have decreased. This is what one would have expected.

The following Table shows the populations in each Ward at the Census 1901 and the Census 1911 respectively.

TABLE I.
Populations in Wards.

Ward	Population at Census		Increase or decrease	Number	Males		Females	
	1901	1911			1901 Census	1911 Census	1901 Census	1911 Census
St. Stephen's ...	8972	10783	Increase	1811	4213	5084	4759	5699
Trinity	10312	9668	Decrease	644	4683	4493	5629	5175
St. Michael's ...	8479	9254	Increase	775	3914	4282	4565	4972
St. John's... ..	8167	7836	Decrease	331	3703	3592	4464	4244
St. Silas'	8633	9505	Increase	872	3681	4051	4952	5454
St. Paul's... ..	10210	10073	Decrease	137	4671	4571	5539	5502
St. Peter's	8199	7009	Decrease	1190	3890	3318	4309	3691
St. Mary's	6957	6454	Decrease	503	3364	3323	3593	3131
St. Matthew's...	10408	10001	Decrease	407	4792	4697	5616	5304
St. Thomas'	12293	12828	Increase	535	5893	6081	6400	6747
Park	9099	9774	Increase	675	4152	4495	4947	5279
St. Luke's	8811	8422	Decrease	389	4114	3910	4697	4512
St. Mark's	8854	10457	Increase	1603	4002	4784	4852	5673
St. Andrew's	9822	10988	Increase	1166	4620	5107	5202	5881
Borough	129216	133052	Increase	3836	59692	61788	69524	71264

TABLE II.

YEAR.	Population at Census.	BIRTHS.	DEATHS.	Natural Increase in 10 year periods, also expressed as percentage of population.	Excess of Immigration over Emigration in 10 year periods, also expressed as a percentage of population.	Total Increase in 10 year periods, also expressed as a percent- age of the population.
1841	36,629		955			
1842			945			
1843			1220			
1844			1143			
1845			1124			
1846			1488			
1847			1445			
1848			1214			
1849			1125			
1850			1315			
1851	46,536	2035	1264			
1852		2000	1697			
1853		2130	1758			
1854		2241	1320			
1855		2181	1781	6859	9731	16590
1856		2324	1330	14.7 %	20.9 %	35.6 %
1857		2372	1824			
1858		2277	1847			
1859		2479	1547			
1860		2675	1487			
1861	63,126	2773	1774			
1862		2754	1815			
1863		2568	1440			
1864		2730	1746			
1865		2737	1881	9211	4002	13213
1866		2775	2146	14.5 %	6.3 %	20.9 %
1867		2915	1867			
1868		3155	1961			
1869		3007	2337			
1870		3082	2318			
1871	76,339	3166	2033			
1872		3463	2050			
1873		3227	2462			
1874		3305	2432			
1875		3412	2200			

TABLE II—Continued.

YEAR.	Population at Census.	BIRTHS.	DEATHS.	Natural Increase in 10 year periods, also expressed as percentage of population.	Excess of Immigration over Emigration in 10 year periods, also expressed as a percentage of population.	Total Increase in 10 year periods, also expressed as a percent- age of the population.
1876		3425	2435	10820	16855	27675*
1877		3518	2134	14'1%	less	less
1878		3456	2742		12056 =	12056 =
1879		3418	2174		4799 or	15619 or
1880		3386	2294		6 2 %	20 4 %
1881	104,014	3919	2431			
1882		3918	2665			
1883		4305	2660			
1884		4132	2663			
1885		4000	2452			
1886		4004	2863	13186	2864	16050
1887		4164	2974	12 6 %	2'7 %	15'4%
1888		4111	2865			
1889		4150	3077			
1890		4015	2882			
1891	120,064	4085	3116			
1892		3883	2551			
1893		3822	2793			
1894		3621	2173			
1895		3899	3084	10853	-3291	7562
1896		3552	2269	9'04 %	-2 7%	6'3%
1897		3629	2529			
1898		3662	2439			
1899		3643	2607			
1900		3438	2820			
1901	129,216	3386	2495			
1902		3357	2247			
1903		3304	2069			
1904		3100	2274			
1905		3193	2183	10514	6666	3848
1906		3418	2193	8 13%	5'15%	2'98%
1907		3348	2293			
1908		3415	2157			
1909		3139	2234			
1910		2948	1949			
1911	133,052	2857	2149			
1912		2741	1928			

* The population of the added portions of Witton, Livesey, Lower Darwen and Little Harwood are here deducted.

Between 1871 and 1881 the following additions were made to the Borough. In July, 1877: Livesey (part of) 4449; Witton (part of) 4180; Little Harwood (part of) 33. In July, 1879. Lower Darwen (part of) 2712; Little Harwood (part of) 682.

In November, 1901, parts of Witton and Livesey were added to the Borough, and the Registrar General has added these figures to those obtained at the 1901 Census.

TABLE III.

Age Periods in Years.	Population estimated to the middle of 1912.	
	M	F
Under 5	6103	5898
5 — 15	12234	13589
15 — 25	13237	16317
25 — 35	9980	12838
35 — 45	9059	11352
45 — 55	6504	7273
55 — 65	3745	4676
65 — 75	1598	2320
75 and upwards	439	700
Total.....	62899	74963

The figures in this Table cannot be estimated properly until further information has been received from the Registrar-General.

MARRIAGES.

The number of marriages solemnised within the County Borough of Blackburn during 1912 was 1,214, compared with 1,227 during 1911.

Of these, 637 took place in the Established Churches and 577 in Nonconformist places of worship and at the Register Office.

The annual rate of persons married per 1,000 of the population was 18.1.

The Marriage Rates for the previous five years were as follows :—

1907	.....	19.4
1908	.....	17.8
1909	.....	17.4
1910	.....	17.4
1911	.....	18.4

BIRTHS.

The number of births registered during the year in Blackburn was 2,741, of which 1,374 were males and 1,367 were females. equal to a birth-rate of 20.5 per 1,000 living.

After correction by the statement received from the Registrar-General, which stated that the number of births transferable to other districts were six, and births belonging to Blackburn registered in outside districts were two, the net births for the year were 2,737, which is equal to a birth-rate of 20.4 per 1,000 living.

This is the lowest Birth-Rate ever recorded in Blackburn.

The birth-rates per 1,000 living during 1912, for England and Wales, were as follows:—

England and Wales	23.8
95 Great Towns (including London)	24.9
146 Smaller Towns	23.8
England and Wales (less the 241 towns) ...	22.6
London	24.7

Also a reference to Table XIII. will show that only four of the 33 large towns named in that Table had a lower birth-rate than Blackburn during the year 1912.

ILLEGITIMATE BIRTHS.

Of the 2,741 births, 138 were illegitimate, which is equal to a percentage of 5.0.

Similar percentages for the years 1908, 1909, 1910, and 1911, were 4.4, 4.8, 4.3, and 4.4 respectively.

During the year inquiries have again been made respecting these illegitimate births.

Of the 138 illegitimate births during 1912, 73 were males and 65 were females.

Thirty of such births occurred in the Union Workhouse.

One hundred and ten cases were investigated, and the following is a summary of the results obtained:—

As to the occupation of the parents, the following information was obtained:—

MOTHERS.

Weavers	33	Charwomen	4
Winders	28	Housekeepers	4
Cardroom Hands ...	15	Laundresses	6
Ring-Spinners	19	Other Occupations ...	17
Servants	12		

FATHERS.

Labourers	30	Drawers-in	4
Weavers	15	Colliers	2
Carters	8	Other Occupations ...	73
Spinners	6		

In Table IV. it will be observed that only 7 illegitimate births have been tabulated as occurring in the Workhouse, although 30 illegitimate children were born in that Institution during 1912. As the Registrar now obtains the address of the mother before admission to the Workhouse, when the birth is registered, it is possible for me to assign each birth to the proper Ward, instead of the Ward—namely, St. Thomas’—in which the Workhouse is situate, as was the case formerly.

There were in attendance at birth :—

Doctors	32
Midwives	65
Doctors and Midwives	10
Handy-women	3

ILLEGITIMATE INFANTS.

NO. OF INFANTS IN INQUIRY 110.

Age of Mother at birth of 1st child		20 & under	42	} 110	
		30 " "	63		
		over 30	5		
Industrial Work	discontinued before confinement	within 24 hrs.	13	} 110	
		under 1 mth.	18		
		1 mth.	20		
		2 mths.	18		
	resumed after confinement	3 mths.	27		} 110
		under 1 mth.	10		
		1 mth.	28		
		2 mths.	8		
Nursed		3 mths.	8	} 110	
		home	88		
		out	22		
Feeding	breast entirely	1 mth. & under	20	} 110	
		2 " "	23		
		3 " "	9		
		6 " "	19		
	breast partly	1 mth. & under	...		} 110
		2 " "	...		
		3 " "	...		
		6 " "	1		
Mode of feeding		artificial entirely	35	} 110	
		not fed	3		
		Hygienic Bottle	41		
		Tube Bottle	4		
		Hy. Bot. & Tube Bot.	10		
		Spoon	15		
Dead		before 1st visit	11	} 110	
		under 2 mths.	2		
		" 3 "	2		
		" 6 "	2		
Removed		over 6 "	6	} 110	
		under 3 mths.	7		
		clean	81		
Cleanliness	of child	fairly clean	16	} 99	
		dirty	2		
		clean	58		
	of house	fairly clean	35	} 110	
		dirty	7		
		satisfactory	30		
General conditions of case		fairly sat.	31	} 99	
		unsatisfactory	38		
		slept alone	19		
		no comforter	37		

TABLE IV.—ILLEGITIMATE CHILDREN.

Ward.	No. of Births.	Total number of deaths at all ages	Deaths under 1 year of age.
St. Stephen's	12	6	5
Trinity	10	1	1
St. Michael's.....	4	...	...
St. John's	12	3	3
St. Silas'.....	2	1	1
St. Paul's	17	3	2
St. Peter's	13	4	4
St. Mary's	15	2	1
St. Matthew's	10	1	1
St. Thomas'	9	3	3
Park.....	8	3	3
St. Luke's	8	1	1
St. Mark's	7	2	1
St. Andrew's	4	2	1
*Workhouse	7	...	...
Borough	138	32	27

* The Workhouse is situate in St. Thomas' Ward.

The percentage of deaths of illegitimate children under one year of age to the total number of illegitimate births registered during the year was 20.0. This is less by 12.8 per cent. than was the case during 1911.

STILLBORN CHILDREN.

The following are the numbers of Stillborn Children brought to the Cemetery and reported to me by the Cemetery Registrar during the year 1912:—

Jan.	Feb.	Mar.	April.	May.	June.
13	14	11	16	17	15
July.	Aug.	Sept.	Oct.	Nov.	Dec.
19	9	10	15	13	12

Total: 164.

These figures include miscarriages, viz., children born before the seventh month of pregnancy. The Stillbirths, as notified to me by Doctors, Midwives, etc., in connection with the Notification of Births Act, numbered 138 during the year.

Visits were paid to these houses by the Lady Inspectors, and the following particulars were obtained:—

Of these 138 Stillbirths, 74 were males and 64 were females. There were four illegitimate births.

Visits were paid to 130 houses from which Stillbirths had been notified during the year 1912, and particulars were obtained in 125 cases. Eight cases occurred in the Union Workhouse.

In 29 cases a Doctor attended at confinement.

„ 36 „ Midwife „ „
 „ 60 „ both a Doctor and Midwife attended at confinement.

As to the duration of pregnancy, it was ascertained that—
 66 were in the ninth month of pregnancy.

13 „ eighth „ „
 46 „ seventh „ „

Regarding the presentations, there were 55 vertex, 23 breech, 14 feet, 7 transverse, 3 face, and 1 arm. In 22 cases the presentation could not be ascertained.

As to the cause of these Stillbirths, according to the mothers' statements, 6 were ascribed to the mother having fallen, 5 to general debility, 6 to strain, and 39 to abnormal conditions of labour. In 69 cases no cause was alleged.

As to the occupations of the mothers of these stillborn children, it was found that 59 were employed in the cotton industry, 57 were engaged in house duties, and 9 were employed in miscellaneous occupations.

With regard to the length of time during which the mothers of these stillborn children stayed away from work before confinement, it was found that—

2 were at work on the same day as the confinement.

8 stayed away from work one day previous to confinement.

2	..	..	two days	..	..
1	..	..	three days	..	..
3	..	..	one week	..	..
2	..	..	two weeks	..	..
5	..	..	three weeks	..	..
1	..	..	five weeks	..	..
6	..	..	six weeks	..	..
2	..	..	seven weeks	..	..
1	..	..	nine weeks	..	..
5	..	..	one month	..	..
10	..	..	two months	..	..
8	..	..	three months	..	..
12	..	..	longer than three months previous to confinement.		

Regarding the condition of the homes at which stillbirths occurred, 108 were clean, 15 were fairly clean, and 2 were dirty.

TABLE V.
STILLBIRTHS NOTIFIED.

Ward.	1908	1909	1910	1911	1912
St. Stephen's	18	21	6	17	8
Trinity	15	17	15	8	13
St. Michael's	11	12	9	8	8
St. John's.....	15	6	13	6	4
St. Silas'	12	7	4	2	6
St. Paul's	15	11	10	5	17
St. Peter's.....	16	10	5	7	7
St. Mary's ...	9	10	7	7	3
St. Matthew's	22	21	5	12	9
St. Thomas'*	31	17	14	8	20
Park	11	19	11	15	13
St. Luke's ...	13	12	7	7	11
St. Mark's ...	11	15	8	11	8
St. Andrew's	11	20	17	8	11
Total ..	210	198	131	121	138

* The Blackburn Union Workhouse is in this Ward.

DEATHS.

In the following Tables, VI. to XV., will be found classifications of deaths in Blackburn during 1912, according to age, disease, locality, period, and also comparisons with other towns.

During the year 1912, there were 1,928 deaths, of which 950 were males and 978 were females.

Adjustment has been made for those persons who belonged to outside districts, and who died in Blackburn, and for Blackburn residents who died in outside districts.

The total number of non-residents who died in institutions in this Borough was 118 as compared with 123 such deaths during 1911.

They came from the following districts, viz. :—Darwen, 56 ; Clayton-le-Moors, 10 ; Rishton, 7 ; Oswaldtwistle, 4 ; Great Harwood, 4 ; Clitheroe, 4 ; Church, 5 ; Livesey, 3 ; Haslingden, 3 ; Billington, 3 ; Blackpool, 2 ; Mellor, 2 ; Balderstone, 2 ; Eccleshill, 2 ; Accrington, Clayton-le-Dale, Morecambe, Chatburn, Brindle, Ramsgreave, Carlisle, Boosbeck, Netley, Whalley, and Baxenden, one each.

The number of deaths amongst Blackburn residents occurring in districts outside was 58 as compared with 30 during 1911.

These deaths are reported to me quarterly by the Registrar-General, and occurred at the following places :—Lancaster Asylum, Whittingham Asylum, Prestwich Asylum, Winwick Asylum, Victoria Hospital, Blackpool ; Sanatorium, Blackpool ; Birkenhead Workhouse, Burnley Workhouse, Royal Infirmary, Manchester ; Ancoats Hospital, Manchester ; Strangeways Prison, Manchester ; Home for Blind, Fulwood ; Meathop Sanatorium, Grange ; National Sanatorium, Benenden ; General Infirmary, Chester ; Infirmary, Bolton ; Workhouse, Liverpool ; Children's Hospital, Liverpool ; Poor-

Law Hospital, Stockport ; and at Harrogate, Colne, Great Harwood, Blackpool, Horwich, Withnell, Hoghton, Tottington, Morecambe, Saltcoats, N.B., Clayton-le-Dale, and Darwen.

The resulting death-rate is equal to 14.4 per 1,000.

This is the lowest death-rate ever recorded in Blackburn.

The following are the corrected Death-Rates per 1,000 living for England and Wales during 1912 :—

England and Wales	13.3
95 Great Towns (including London)	14.6
146 Smaller Towns	13.0
England and Wales (less the 241 Towns) ...	12.1
London	14.3

It will, therefore, be seen that the Blackburn Death-Rate for 1912 was less than that of the 95 great towns of England and Wales.

The decrease in the number of deaths for 1912, as compared with 1911, was in the following diseases :—Scarlet Fever, Whooping Cough, Diphtheria, Phthisis, Diarrhœa, Bronchitis, and Pneumonia.

The decrease was especially marked in Diarrhœa.

The increase in the number of deaths for 1912, as compared with 1911, was in the following diseases :—Measles, Influenza, Cancer, and Nervous Diseases.

The deaths from Enteric Fever, Developmental Diseases, Old Age, and Heart Diseases remained about the same during 1912 as during 1911.

The largest numbers of deaths at all ages during 1912 were from Bronchitis, Pneumonia, Heart Diseases, Old Age, Cancer, and Phthisis, which claimed 206, 190, 182, 141, 128, and 109 victims respectively.

On referring to Table XII., it will be seen that during 1912 the lowest death-rates occurred in St. Silas's and St. Michael's Wards, with rates of 9.0 and 10.6 respectively.

The highest Ward death-rate occurred in St. Peter's Ward, namely, 20.8.

Again, as in previous years, Table XII. also shows the striking difference in the death-rates from Phthisis in the various Wards.

The Wards with a Phthisis death-rate above 1 per 1,000 were St. Peter's, St. Matthew's, and Park.

The remaining eleven Wards had a Phthisis death-rate of less than 1 per 1,000.

This is very satisfactory compared with many previous years.

From Table XI. it will be seen that the lowest Weekly Death-Rate occurred in the week ending September 14th, and the highest Weekly Death-Rate occurred in the week-ending February 10th.

TABLE VI.

Year.	Popu- lation in Census Years.	Popula- tion esti- mated to middle of year.	Birth Rate.	Death Rate.	Average Death rate in 10 year periods.	Year.	Popula- tion in Census Years.	Popula- tion esti- mated to middle of year.	Birth Rate.	Death Rate.	Average death rate in 10 year periods.
1841	36,629	36,849		29'9	29'02	*1877	...	90,089	39'0	23'6	26'5
1842	...	37,742		25'0		1878	...	96,031	35'9	28'5	
1843	...	38,656		31'5		†1879	...	98,869	35'5	21'9	
1844	...	39,593		28'8		1880	...	102,736	32'9	22'2	
1845	...	40,552		27'7		1881	104,014	104,388	37'5	22'4	
1846	...	41,534		35'7	29'47	1882	...	105,897	36'9	24'3	23'83
1847	...	42,541		33'9		1883	...	107,427	40'0	23'9	
1848	...	43,571		27'8		1884	...	108,980	37'9	23'6	
1849	...	44,627		25'2		1885	...	110,555	36'1	21'3	
1850	...	45,708		28'7		1886	...	112,153	35'6	24'7	
1851	46,536	46,892	43'3	27'0	29'83	1887	...	113,774	36'5	25'3	21'32
1852	...	48,344	41'3	35'1		1888	...	115,418	35'6	24'0	
1853	...	49,841	42'7	35'2		1889	...	117,086	35'5	25'4	
1854	...	51,384	43'6	25'6		1890	...	118,780	33'8	23'4	
1855	...	52,974	41'7	33'6		1891	120,064	120,245	33'9	25'9	
1856	...	54,614	42'5	24'3	27'83	1892	...	120,972	32'0	21'0	16'8
1857	...	56,306	42'1	32'2		1893	...	121,704	31'4	22'9	
1858	...	58,049	39'2	31'8		1894	...	122,440	29'5	17'7	
1859	...	59,846	41'4	25'8		1895	...	123,181	31'6	25'0	
1860	...	61,699	43'3	24'1		1896	...	123,926	28'6	18'3	
1861	63,126	63,434	43'7	27'9	26'5	1897	...	124,675	29'1	20'2	16'8
1862	...	64,681	42'5	28'1		1898	...	125,430	29'1	19'4	
1863	...	65,953	38'9	21'8		1899	...	126,185	28'8	20'6	
1864	...	67,249	40'5	25'9		1900	...	126,951	27'0	22'2	
1865	...	68,572	39'9	27'4		||1901	129,216	129,311	26'1	19'2	
1866	...	69,920	39'6	30'7	26'5	1902	...	129,689	25'8	17'3	16'8
1867	...	71,294	40'8	27'5		1903	...	130,069	25'4	15'9	
1868	...	72,696	43'3	26'9		1904	...	130,451	23'7	17'4	
1869	...	74,125	40'5	31'5		1905	...	130,833	24'4	16'6	
1870	...	75,583	40'7	30'6		1906	...	131,216	26'0	16'7	
1871	76,339	76,695	41'1	26'5	26'5	1907	...	131,600	25'4	17'4	16'8
1872	...	78,136	44'3	26'2		1908	...	131,986	25'8	16'3	
1873	...	79,604	40'5	30'9		1909	...	132,373	23'7	16'8	
1874	...	81,099	40'7	29'9		1910	...	132,760	22'2	14'6	
1875	...	82,624	41'2	26'6		||1911	133,052	133,149	21'4	16'1	
1876	...	84,716	40'4	28'7		1912	...	133,539	20'4	14'4	

* Part of Witton, Livesey, and Little Harwood—population 8,662.

Half of this has been added to 1877 population.

† Part of Little Harwood and Lower Darwen—population 2,394.

Half of this has been added to year 1879 population.

|| Part of Witton and Livesey added in November, 1901, and the Registrar General has added this to the 1901 Census figures.

TABLE VII.

1912.

AGE PERIODS.	MALES.		FEMALES.	
	Deaths.	Death Rate	Deaths.	Death Rate.
0-5	255	41'7	229	38'8
5-15	28	2'2	21	1'5
15-25	42	3'1	38	2'3
25-35	58	5'8	62	4'8
35-45	84	9'2	81	7'1
45-55	115	17'6	98	13'4
55-65	154	41'1	157	33'5
65-75	147	91'9	184	79'3
75 and upwards.	67	152'6	108	154'3

TABLE VIII.

Monthly Births and Deaths for 1912.

Month.	Births.	Deaths.	Measles.	Scarlet Fever	Whooping Cough.	Croup.	Typhoid Fever.	Diphtheria	Diarrhoea.	Lung Diseases.	Tuberculosis.	All Other Diseases.
January	265	164	1	...	...	...	...	3	1	22	17	120
February ...	219	192	4	1	...	...	1	...	...	61	14	111
March	242	170	7	...	4	...	1	1	...	44	13	100
April	236	175	11	...	...	...	...	...	1	46	15	102
May	237	172	7	...	4	...	1	1	...	43	12	104
June	211	146	9	2	4	...	...	1	3	21	12	94
July	252	143	8	...	2	...	1	1	6	20	7	98
August	223	153	2	...	...	...	1	1	9	17	12	111
September	238	107	1	...	3	...	...	1	4	11	8	79
October.....	232	150	1	...	2	...	...	...	7	32	9	99
November...	189	141	1	...	3	...	2	...	2	27	9	97
December...	197	215	...	...	5	...	...	...	7	70	14	119

TABLE IX.—(SHORTER SCHEDULE B)

CAUSE OF DEATH.	0—1		1—5		5—15		15—25		25—65		65 & up		M.	F.	To- TAL.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
Smallpox															
Measles	7	6	16	20	2	1							25	27	52
Scarlet Fever	1		2										3		3
Typhus Fever															
Epidemic Influenza								3	5	6	3	3	8	12	20
Whooping Cough	7	7	3	10									10	17	27
Diphtheria & Membranous Croup			4	4		1							4	5	9
Croup															
Enteric Fever							1		5	1			6	1	7
Other continued Fevers ..															
Cholera															
Diarrhoea	7	9	1	2				2		1	1	11	12	23	
Plague															
Epidemic or Zymotic Enteritis	8	7	1	1									9	8	17
Erysipelas								1		1		2			2
Puerperal Fever									3					3	3
Other Septic Diseases	3				1			3	3				7	3	10
Intermittent and Malarial Cachexia															
Tuberculosis of Meninges...	1	1	1	1	2		1		1				5	3	8
Phthisis	1		2		2	3	10	14	50	27			65	44	109
Other Tuberculous Diseases	4	2	3	1	2	2	2	2	5				13	12	25
Malignant Disease (Cancer)								1	37	47	15	28	52	76	128
Premature Birth	35	31		1									35	32	67
Developmental Diseases ..	8	7					1						9	7	16
Old Age								5	4	58	74	63	78	141	
Meningitis	2	2	3	3	1	3		1	3	1		2	9	12	21
Inflammation and Softening of Brain								4	1	7	2	11	3	14	
Organic Diseases of Heart.					3	1	2	5	47	68	21	35	73	109	182
Venereal Diseases		2									1			1	2
Bronchitis	12	15	3	5			1	3	45	39	38	45	99	107	206
Pneumonia	20	14	16	16	1	3	6	2	58	29	9	16	110	80	190
Pleurisy			3		1	1		1	4	1	1		9	3	12
Other Respiratory Diseases								2	3	1			3	3	6
Diseases of Stomach	2	1					1		1	10		2	4	13	17
Obstruction of Intestines ..							1		2	4	3	2	6	6	12
Cirrhosis of Liver								4	3	1			5	3	8
Alcoholism								3		1			4		4
Nephritis & Bright's Disease					1	1		16	23	3	19	20	43	63	
Tumour and other Affections of female genital organs							1		3					4	4
Accidents and Diseases of Parturition									9					9	9
Deaths by Suicide								9	3	1		10	3	13	
Homicide							1							1	1
Deaths from Ill-defined Causes	1			1			1		12	13	7	4	21	18	39
Deaths by Accidents or Negligence			5	8	6	1	7		15	5	1	3	34	17	51
All other Causes	63	41	10	11	7	4	7	4	76	86	41	56	204	202	406
TOTAL	182	145	73	84	28	21	42	38	411	398	214	292	950	978	1928

TABLE XI.
Weekly Births and Deaths for 1912.

1912.	Deaths from all causes.	Death Rate per 1,000 per annum.	Deaths from Seven Principal Zymotics.	Death Rate per 1,000 for Zymotics.	Births.	Birth Rate per 1,000 per annum.
Week ending Jan. 6	41	16.0	2	0.7	51	19.9
" " 13	32	12.4	1	0.3	64	24.9
" " 20	25	9.7	0	0.0	52	20.2
" " 27	44	17.1	3	1.1	60	23.3
" Feb. 3	38	14.8	0	0.0	44	17.1
" " 10	64	24.9	1	0.3	65	25.3
" " 17	31	12.0	1	0.3	69	26.8
" " 24	48	18.6	2	0.7	43	18.6
" March 2	36	14.0	1	0.3	42	16.3
" " 9	42	16.3	2	0.7	60	23.3
" " 16	33	12.8	2	0.7	52	20.2
" " 23	29	11.2	1	0.3	59	22.9
" " 30	41	15.9	4	1.5	60	23.3
" April 6	35	13.6	2	0.7	60	23.3
" " 13	35	13.6	2	0.7	53	20.6
" " 20	48	18.6	3	1.1	59	22.9
" " 27	46	17.9	5	1.9	44	17.1
" May 4	46	17.9	7	2.7	50	19.4
" " 11	30	11.6	2	0.7	55	21.4
" " 18	47	18.2	0	0.0	55	21.4
" " 25	28	10.9	2	0.7	60	23.3
" June 1	42	16.3	2	0.7	40	15.5
" " 8	37	14.4	3	1.1	56	21.8
" " 15	38	14.8	5	1.9	52	20.2
" " 22	23	8.9	2	0.7	52	20.2
" " 29	29	11.2	6	2.3	50	19.4
" July 6	39	15.1	8	3.1	43	16.7
" " 13	36	14.0	2	0.7	67	27.5
" " 20	38	14.7	8	3.1	53	20.6
" " 27	30	11.6	1	0.3	57	22.1
" August 3	22	8.5	0	0.0	54	21.0
" " 10	32	12.4	2	0.7	50	19.4
" " 17	33	12.8	4	1.5	33	12.8
" " 24	28	10.9	2	0.7	60	23.3
" " 31	38	14.7	4	1.5	58	22.5
" Sept. 7	25	9.7	3	1.1	47	18.2
" " 14	15	5.8	0	0.0	73	28.4
" " 21	26	10.1	1	0.3	47	18.2
" " 28	22	8.5	1	0.3	56	21.8
" Oct. 5	28	10.9	2	0.7	44	17.1
" " 12	47	18.2	7	2.7	62	24.1
" " 19	37	14.4	2	0.7	46	17.9
" " 26	25	9.7	1	0.3	51	19.8
" Nov. 2	39	15.1	1	0.3	56	21.8
" " 9	33	12.8	0	0.0	46	17.9
" " 16	32	12.4	3	1.1	43	16.7
" " 23	31	12.0	2	0.7	45	17.5
" " 30	30	11.6	3	1.1	43	16.7
" Dec. 7	46	17.9	3	1.1	53	20.6
" " 14	49	19.0	2	0.7	40	15.5
" " 21	44	17.1	1	0.3	41	15.9
" " 28	47	18.2	5	1.9	38	14.7

TABLE XII.

WARDS.	Popula- tion.	Deaths	Births.	Death Rate.	Birth Rate.	Deaths under one year per 1000 Births.	Death- rate from six Zymotic Diseases.	Death- rate from Diar- rhoea.	Death- rate from Bronchitis and Pneu- monia.	Death- rate from Phthi- sis.
ST. STEPHEN'S...	11009	152	229	13·8	20·8	113·5	0·7	0·4	2·1	0·9
TRINITY	9590	158	242	16·4	25·2	140·5	0·8	0·4	4·5	0·9
ST. MICHAEL'S.	9350	100	172	10·6	18·3	81·4	0·5	0·1	1·6	0·5
ST. JOHN'S	7795	113	164	14·4	21·0	121·9	1·2	0·1	3·0	0·6
ST. SILAS'	9612	87	144	9·0	14·9	69·4	0·1	0·0	1·6	0·2
ST. PAUL'S	10056	168	237	16·7	23·5	122·3	1·3	0·1	3·5	0·5
ST. PETER'S.....	6872	143	154	20·8	22·4	116·8	0·7	0·4	3·7	1·7
ST. MARY'S	6393	132	138	20·6	21·5	115·9	1·4	0·4	6·1	0·9
ST. MATTHEW'S	9950	139	216	13·9	21·7	115·7	0·6	0·3	2·7	1·2
ST. THOMAS'	12892	168	237	13·0	18·3	105·4	0·7	0·2	2·4	0·5
PARK	9857	127	196	12·8	19·8	147·9	0·3	0·6	3·6	1·1
ST. LUKE'S	8374	149	172	17·7	20·5	168·5	0·8	0·3	3·2	0·4
ST. MARK'S	10656	126	210	11·8	19·7	90·4	0·5	0·4	2·0	0·8
ST. ANDREW'S..	11133	166	230	14·9	20·6	143·4	0·5	0·09	2·6	0·8
BOROUGH	133539	1928	2741	14·4	20·5	119·2	0·7	0·2	2·9	0·8

TABLE XIII.

Towns.	Birth Rate.	Death Rate.	Deaths under 1 year per 100 births	Death rate over one year.	Death rate from the seven Zymotic diseases	Death rate from Diarrhoea.*	Death rate from Violence.	Inquest Cases percentage to total Deaths.	Uncertified cause of Death percentage to total Deaths.
London ...	24·8	13·5	90	11·2	1·06	0·03	0·59	10·7	0·1
West Ham	29·4	14·1	104	11·0	1·84	0·34	0·61	9·3	0·1
Croydon ..	22·0	10·6	75	8·9	0·68	0·26	0·34	11·4	0·0
Brighton...	18·9	12·6	76	11·1	0·43	0·12	0·38	8·0	0·0
Portsmouth	23·7	12·9	82	10·9	1·58	0·23	0·37	7·4	0·8
Plymouth ..	21·7	14·8	107	12·4	0·81	0·24	0·43	8·8	0·07
Bristol.....	21·4	13·3	102	11·1	0·94	0·15	0·43	9·5	0·0
Cardiff.....	26·1	13·7	109	10·9	1·96	0·27	0·56	11·2	0·0
Swansea ...	27·6	13·3	99	10·4	1·52	0·29	0·51	7·8	0·5
W'h'mpton	25·3	13·3	87	11·1	0·74	0·22	0·42	9·7	0·1
B'rmingh'm	26·1	14·1	112	11·1	1·65	0·26	0·53	5·2	3·3
Norwich ...	21·8	12·7	103	10·3	0·72	0·21	0·46	7·1	0·7
Leicester ...	22·1	13·4	111	10·9	0·98	0·19	0·53	8·2	0·4
Nottingh'm	23·7	14·4	117	11·6	1·41	0·28	0·48	7·3	0·3
Derby	23·5	12·1	79	10·1	0·49	0·16	0·35	9·6	0·0
Birkenhead	28·2	14·3	97	11·5	1·40	0·48	0·51	8·2	0·4
Liverpool...	29·6	18·1	125	14·4	2·39	0·60	0·62	7·1	2·1
Bolton	22·4	13·4	98	11·2	0·80	0·19	0·40	8·1	0·3
Manchester	25·4	16·0	121	12·9	1·70	0·35	0·59	7·7	0·3
Salford ...	26·4	16·5	128	13·0	2·25	0·39	0·58	8·3	0·5
Oldham ...	23·0	16·1	116	13·4	1·21	0·22	0·44	7·1	0·02
Burnley ...	22·9	14·6	146	11·3	1·07	0·37	0·72	7·9	1·3
Blackburn	20·4	14·4	119	11·9	1·00	0·26	0·48	6·1	2·0
Preston ..	23·3	16·6	120	13·7	2·16	0·28	0·50	3·9	3·1
Hudd'sfield	18·9	13·6	96	11·8	0·82	0·10	0·38	6·5	0·2
Halifax ...	18·3	14·7	81	13·1	0·48	0·08	0·41	6·1	0·3
Bradford...	19·3	14·3	99	12·4	0·70	0·08	0·44	8·4	0·1
Leeds	23·2	14·2	102	11·7	1·03	0·22	0·54	10·3	0·1
Sheffield ...	27·6	14·2	106	11·2	1·35	0·29	0·53	7·3	0·6
Hull.....	27·7	14·4	101	11·5	1·03	0·22	0·75	9·9	0·6
Sunderland	31·4	15·8	116	12·2	1·09	0·19	0·71	8·2	2·2
Gateshead.	27·5	15·4	103	12·5	1·84	0·22	0·59	4·7	5·6
Newcastle.	26·9	14·2	102	11·4	1·23	0·18	0·51	8·7	0·3

* The Registrar-General has only included the deaths of persons under 2 years of age in this year's return.

TABLE XIV.

Death-rates from Zymotic Diseases in the 33 large towns.

	Small Pox.	Measles	Scarlet Fever.	Diph- theria.	Whooping Cough.	Enteric Fever.	*Diarrhoea
London	0.00	0.39	0.03	0.10	0.21	0.03	0.30
West Ham	0.00	0.84	0.06	0.12	0.43	0.05	0.34
Croydon ...	0.00	0.18	0.005	0.14	0.06	0.04	0.26
Brighton ...	0.00	0.18	0.04	0.02	0.02	0.05	0.12
Portsmouth	0.00	0.40	0.12	0.52	0.22	0.09	0.23
Plymouth ...	0.00	0.05	0.01	0.18	0.25	0.08	0.24
Bristol	0.01	0.43	0.02	0.13	0.19	0.01	0.15
Cardiff	0.00	1.09	0.04	0.17	0.31	0.08	0.27
Swansea ...	0.00	0.61	0.05	0.28	0.28	0.01	0.29
Wolverh'ton	0.01	0.12	0.07	0.11	0.20	0.01	0.22
Birmingham	0.00	0.67	0.18	0.12	0.39	0.03	0.26
Norwich ..	0.00	0.15	0.11	0.16	0.03	0.06	0.21
Leicester ...	0.00	0.42	0.05	0.09	0.21	0.02	0.19
Nottingham	0.00	0.62	0.09	0.10	0.27	0.05	0.28
Derby	0.00	0.06	0.02	0.10	0.14	0.01	0.16
Birkenhead	0.00	0.39	0.08	0.15	0.26	0.04	0.48
Liverpool ...	0.00	1.15	0.12	0.14	0.35	0.03	0.60
Bolton	0.00	0.19	0.05	0.11	0.21	0.05	0.19
Manchester	0.002	0.68	0.07	0.13	0.41	0.06	0.35
Salford	0.00	1.05	0.04	0.14	0.55	0.08	0.39
Oldham	0.00	0.44	0.04	0.08	0.43	0.00	0.22
Burnley	0.00	0.22	0.03	0.06	0.33	0.06	0.37
Blackburn	0.00	0.38	0.02	0.06	0.20	0.05	0.26
Preston	0.00	0.78	0.31	0.34	0.38	0.07	0.28
Huddersfield	0.01	0.19	0.18	0.08	0.24	0.02	0.10
Halifax	0.00	0.15	0.08	0.05	0.08	0.04	0.08
Bradford ...	0.00	0.17	0.04	0.19	0.05	0.17	0.08
Leeds... ..	0.00	0.36	0.09	0.20	0.12	0.04	0.22
Sheffield ...	0.00	0.39	0.07	0.10	0.41	0.09	0.29
Hull	0.00	0.52	0.002	0.08	0.09	0.12	0.22
Sunderland	0.00	0.44	0.01	0.14	0.28	0.03	0.19
Gateshead...	0.00	0.95	0.04	0.20	0.42	0.01	0.22
Newcastle ..	0.00	0.61	0.13	0.11	0.14	0.06	0.18

* See Note on previous Table.

TABLE XV.

Showing Population, Birth-rates, and Death-rates, for the last 20 years in Blackburn.

Year.	Esti- mated Popu- lation	Birth Rate.	Death Rate.	Zymotic Death rate in- cluding Diarr- hoea.	Death rate from Bron- chitis. Pneu- monia & Pleurisy.	Death rate from Phthi- sis.	Death rate from other Tuber- cular Diseases	Deaths under 1 year per 1000 Births.
1893	121,704	31'4	22'9	4'8	5'3	1'1	1'1	241
1894	122,440	29'5	17'7	2'9	3'9	1'2	0'7	168
1895	123,181	31'6	25'0	6'1	4'7	1'2	1'1	235
1896	123,926	28'6	18'3	1'9	3'8	1'1	0'5	172
1897	124,675	29'1	20'2	3'2	4'0	1'1	0'7	207
1898	125,430	29'1	19'4	2'6	3'6	1'2	0'5	204
1899	126,185	28'8	20'6	2'7	4'4	1'2	0'5	193
1900	126,951	27'0	22'2	3'9	4'8	1'1	0'7	221
1901	129,311	26'1	19'2	3'5	3'7	1'1	0'7	193
1902	129,689	25'8	17'3	1'9	3'5	1'2	0'7	157
1903	130,069	25'4	15'9	1'7	3'4	0'9	0'6	158
1904	130,451	23'7	17'4	2'4	3'7	0'9	0'6	191
1905	130,833	24'4	16'6	2'0	3'1	1'0	0'6	146
1906	131,216	26'0	16'7	2'4	2'7	0'9	0'5	155
1907	131,600	25'4	17'4	1'4	3'7	1'0	0'6	151
1908	131,986	25'8	16'3	1'8	3'0	1'1	0'5	149
1909	132,373	23'7	16'8	1'6	3'7	1'0	0'4	127
1910	132,760	22'2	14'6	1'4	2'7	0'8	0'4	136
1911	133,149	21'4	16'1	2'4	3'1	0'8	0'3	186
1912	133,539	20'4	14'4	1'0	3'0	0'8	0'2	119

TABLE XVI.
INQUEST CASES.

Natural Causes	35
Accidents	39
Suicide	14
Burns	8
Excessive Drinking	3
Scalds—2 years, 14 months, 15 months, 18 months	4
Suffocation (including Overlaying).....	5
Accidentally Drowned	7
Blood Poisoning	3
Homicide	1

Ages of persons burnt :—52 years, 44 years, 40 years, 26 years, 4 years, two at 2 years, and 18 months.

Ages of persons suffocated :—54 years, 20 months, 4 months, 5 weeks, and 23 days.

There were 119 Inquests held during the year as compared with 129 during 1911.

INFANTILE MORTALITY.

During 1912, the death-rate amongst children under one year of age, per 1,000 births, was 119.2, as compared with 186.9 during 1911.

This 1912 rate is the lowest on record, which is an extremely satisfactory state of affairs.

It should be remembered, however, that another hot, dry summer such as we had in 1911 might readily cause an increase in the rate again.

In spite of this, however, I believe that enormous infantile mortality rates such as those in former years will not occur again. There is no doubt that the valuable work which is being carried out by the four Lady Inspectors is already bearing fruit, and I wish to speak in the highest possible terms of their constant endeavours to save the lives of infants and to teach mothers the real meaning of motherhood.

The Infantile Death-Rates or deaths under one year of age per 1,000 births for England and Wales, during 1912, were as follows:—

Deaths under 1 Year per 1,000 Births.	
England and Wales	95
95 Great Towns (including London)	101
146 Smaller Towns	99
England and Wales (less the 241 Towns) ...	86
London	90

The Infantile Mortality rate for Blackburn was, therefore, 18.2 greater than that recorded for the 95 great towns during the year 1912.

In Tables XIII. and XXIII. a comparison between Blackburn and other manufacturing towns may be made.

During 1912, 327 deaths occurred below the age of one year, out of a total number of deaths, namely, 1,928, that is, 16.9 per cent.

It was found that Premature Birth was the most frequent cause of death in the first year of life during 1912.

On referring to Table XVII., it will be seen that St. Silas' Ward, St. Michael's Ward, and St. Mark's Ward had infantile death-rates, during 1912, less than 100, but the birth-rates in these Wards were lower than in the other Wards.

In Table XIX. I have arranged, as in previous years, the deaths under one year, for 1912, according to days, weeks, and months, and the following conclusions may be drawn from this analysis :—

- (a) The number of deaths on the *first day* of life was greater than on any succeeding day, but the number diminished until the last day of the first week of life.
- (b) The number of deaths during the *first week* of life was greater than the three succeeding weeks during the first month of life.
- (c) The number of deaths during the *first month* of life was far greater than the number of deaths in any succeeding month during the first year of life.

PARTICULARS RESPECTING THE 327 DEATHS OF CHILDREN BELOW ONE YEAR OF AGE.

Full inquiries have again been made by the Lady Inspectors respecting the above, during 1912, on the same lines as were set forth in my Annual Report for 1908, and for the same reasons.

Of these 327 infants who died, 182 were males and 145 were females; 27 were illegitimate, 313 were visited and particulars obtained, 11 were not visited, and three were visited but no particulars were obtained.

As to the occupations of the mothers, it was ascertained that 130 were employed in the cotton industry, 162 in house-work, and 23 in other occupations.

Of the 130 mothers employed in the cotton industry,

88 were employed as weavers.

13 ,, ,, cardroom-hands.

12 ,, ,, winders.

12 ,, ,, ring-spinners.

5 ,, ,, warpers.

Eighteen deaths were uncertified, and five inquests were held.

Ninety-one of these 327 children were born prematurely.

Inquiries were also made as to the day on which a doctor was first called in to see the child before death, and the following statement shows the result:—

The same day in 19 cases.

1 day before death in 21 cases.

2 days before death in 15 ,,

3 ,, ,, 18 ,,

4 ,, ,, 9 ,,

5 ,, ,, 11 ,,

6 ,, ,, 7 ,,

7 ,, ,, 21 ,,

9 ,, ,, 1 case.

10 ,, ,, 4 cases.

11 ,, ,, 1 case.

12 ,, ,, 1 ,,

13 ,, ,, 1 ,,

2	weeks	before	death	in	21	cases.
18	days	before	death	in	1	case.
19	„	„	„	„	1	„
3	weeks	before	death	in	10	cases.
27	days	before	death	in	1	case.
4	weeks	before	death	in	4	cases.
5	„	„	„	„	2	„
6	„	„	„	„	2	„
7	„	„	„	„	1	case.
2	months	before	death	in	10	cases.
9	weeks	before	death	in	1	case.
10	„	„	„	„	1	„
3	months	before	death	in	3	cases.

Over 3 months before death in 1 case.

The doctor had been in attendance from birth in 23 cases.

„ „ „ „ at „ 87 „

Respecting the method of feeding, it was found that 59 were breast-fed, 146 were artificially fed, in 48 cases these two methods of feeding had been combined, and in 60 cases the child had not been fed.

Respecting the food for the above-mentioned 146 artificially-fed children, it was found that—

115 had been fed on cow's milk.

10	„	„	milk and barley-water.
3	„	„	milk and bread.
2	„	„	milk and Neave's Food.
16	„	„	other patent foods.

Of these 146 children, 86 were fed with a hygienic bottle, 14 with a long-tubed bottle, 11 with a hygienic bottle and tubed bottle combined, and 35 with a spoon.

Of the 48 children who were partly breast-fed and partly artificially-fed, it was found that—

32 were fed on breast and cow's milk.

6 ,, ,, milk and barley-water.

4 ,, ,, milk and bread.

6 ,, ,, patent foods.

Of these 48 children, 20 were fed with a hygienic bottle, 4 with a long-tubed bottle, 3 with a hygienic bottle and tubed bottle combined, 19 with a spoon, and 1 with a cup.

44 of these 327 children were nursed out.

235 houses were found to be clean, 64 fairly clean, and 14 were dirty.

186 children had been insured.

PARTICULARS RESPECTING THE VISITATION OF 2,614 CHILDREN BORN DURING 1912.

During the year 1912 the four Lady Inspectors have visited and reported upon 2,614 infants out of 2,741 children born during the year.

During the first visits to these 2,614 infants it was found that the occupation of the mothers was as follows :—

Housewives	910
Weavers	977
Winders, Warpers, etc.	269
Cardroom-hands	138
Ring-spinners	133
Other occupations	187

Of these cases reported upon, it was found that at the confinement—

889 mothers had been attended by doctors

1,446	„	„	„	midwives.
270	„	„	„	doctors and midwives.
9	„	„	„	handywomen.

34 births occurred at the Union Workhouse.

Fuller particulars on re-visitation of the homes have been obtained by the Lady Inspectors, during 1912, respecting 2,504 legitimate infants, and it has been convenient to divide these into the three following groups :—

- (a) Particulars respecting 284 infants *under* 3 months of age.
- (b) Particulars respecting 1,992 infants *above* 3 months of age.
- (c) Particulars respecting 228 infants who were born during 1912, and who died before the end of the year 1912.

(A) PARTICULARS RESPECTING 284 INFANTS UNDER
3 MONTHS OF AGE.

No. of Infants in Inquiry 284.

Age of Mother at birth of 1st child	{	20 and under 30 " " over 30	{	61 205 18	{	284	
Industrial Work	{	discontinued before confinement	{	within 24 hrs.	8	{	
				under 1 mth.	15		
				1 "	33		
				2 "	40		
				3 "	62		
				1 "	21		
				2 "	2		
Feeding at 1st visit	{	breast entirely breast partly artificial	{	227	{	284	
				12			
				45			
Mode of Feeding	{	Hygienic Bottle Tube Bottle Hy. Bot. & Tube Bot. spoon	{	52	{		
				7			
				3			
				3			
Condition	{	of house	{	clean	237	{	284
				fair	36		
				dirty	11		
		of child	{	clean	262	{	284
				fair	17		
				dirty	5		
		sleeping alone		31			

(B) PARTICULARS RESPECTING 1992 INFANTS
OVER 3 MONTHS OF AGE.

No. of Infants in Inquiry 1992.			
Age of Mother at birth of 1st child	{ 20 and under 30 " " over 30	{ 382 1485 125	1992
Industrial Work	{ discontinued before confinement resumed after con- finement	{ within 24 hrs. under 1 mth. 1 " " 2 mths. 3 " " 1 mth. 2 mths. 3 " " 60 123 264 227 481 339 188 206	
Infant nursed	{ home out	{ 1428 564	1992
Feeding	{ breast entirely breast partly	{ 1 mth. and under 2 mths. " 3 " " 6 " " 1 mth. " 2 mths. " 3 " " 6 " " 247 345 204 789 16 9 4 13	1992
Mode of feeding	{ artificial entirely Hygienic Bottle Tube Bottle Hy. Bot. & Tube Bot. spoon	{ 365 774 115 128 163	
	slept alone no comforter	{ 679 760	
Condition	{ of child of house	{ clean fair dirty clean fair dirty 1790 176 26 1570 320 102	1992
General condition of case	{ satisfactory fairly satisfactory unsatisfactory	{ 1225 448 319	1992

C) PARTICULARS RESPECTING 228 INFANTS WHO WERE
BORN DURING 1912 AND WHO DIED BEFORE THE END
OF THE YEAR 1912.

No. of Infants in Inquiry 228.

Age of mother at birth of 1st child.....		20 & under	53	} 228
		30 " "	164	
		over 30	11	
Industrial Work..	Discontinued before confinement	within 24 hrs.	14	}
		under 1 month	28	
		1 month	29	
	Resumed after confinement	2 months	23	
		3 months	48	
		1 month	25	
Infant Nursed		2 months	8	}
		3 months	8	
Feeding	Breast entirely	home	212	} 228
		out	16	
		1 mth & under	48	
	Breast partly from birth	2 mths & under	22	} 228
		3 " "	11	
		6 " "	19	
		1 mth & under	1	
		2 mths & under	1	
		3 " "	0	
		6 " "	1	
Mode of Feeding	Artificial entirely		70	}
	Not fed		55	
	{	Hygienic Bottle	41	
		Tube Bottle	12	
		Hy. Bot. & Tube Bot.	8	
		Spoon	46	
Dead		Before 1st visit	103	} 228
		Under 2 months	41	
		" 3 "	17	
		" 6 "	38	
		Over 6 "	29	
Condition	{	clean	114	} 125
		fair	9	
		dirty	2	
	{	clean	176	} 228
		fair	42	
		dirty	10	
General condition of case		satisfactory	59	} 125
		fairly sat.	27	
		unsatisfactory	39	

PATENT FOODS, ETC.

The following foods were found in the undermentioned number of cases:—

Allenbury	22
Allinson	11
Arrowroot	1
Biscuits and Rusks	21
Benger	20
Baldwin's Oatmeal	1
Cornflour	1
Condensed Milk	64
Frame Food	2
Glaxo	3
Horlick	17
Maltovum	13
Moseley	38
Mellin	8
Milo	3
Mersel	1
Neave's	127
Prepared Barley	124
Bread and Milk	123
Rice (ground)	2
Sago	32
Sol	2
Savoury and Moore	8

The foregoing particulars represent a summary of the work during the past year carried out by the Lady Inspectors. The accompanying Tables are drawn up on the same lines as those of the last two years.

It was found undesirable to visit 90 infants born in the Borough, and in 9 instances the family had removed before a first visit was paid.

As regards "sleeping alone," the point has not been noted unless the child already slept alone when two months of age.

“ Breast-feeding ” has not been marked unless given for over two weeks. No foods have been mentioned unless given before the infant was six months of age.

These points were similarly dealt with last year.

In 22 instances the Guardians have notified the removal of an infant born in the Union; and six of these addresses given were out of the Borough.

Some slight improvement may be noted in the two following respects—(1) The number of children sleeping alone has somewhat increased, and (2) rather fewer infants have been given dummy teats.

The list of “ foods ” given is very unsatisfactory. In some cases, without obtaining medical advice, an infant has been given three or four different varieties. Many of the mothers and nurses have great faith in a “ change ” of diet for the infant.

One baby, five weeks old, was fed on crushed charcoal biscuits mixed with water, and another extremely delicate child of four months was found, when visited, with a piece of smoked haddock in its mouth.

Special enquiries have been made this year respecting the use of soothing syrups. The use of these is alarmingly prevalent. The danger of giving such sedative drugs is not at all realised, and mothers, otherwise satisfactory, frequently sin in this respect.

Teething powders and fever cures are regarded as unfailing and necessary household remedies.

The weighing at the Health Office has very largely increased during the past year.

775 visits have been made by mothers with infants, as against 278 last year.

253 infants have attended this year, while last year there were only 164.

Since the rooms on the first floor have been used for the infant weighing, the mothers have been made much more comfortable, and they have greatly appreciated the change of quarters.

It still, unfortunately, requires much persuasion to get the women to attend, especially those from the poorer districts. Also, the mothers have a strong tendency to bring the babies who are above the average weight, rather than those below it, and, of course, it is the latter class one is especially anxious to attract.

It gives me great pleasure to state that the work of the Nursing Mothers' Aid Society, which has its Restaurant at No. 10, Mary Ann-street, has again been carried on successfully for another year. This Society has now been in existence for nearly six years. Owing to the courtesy of Mr. Henry Schofield, the honorary secretary of this Society, I have again had the advantage of examining the charts which indicate the weekly weights of infants who have been taken by their mothers to the Restaurant. These records are quite as satisfactory as they have been in previous years. Several medical men in the town superintend the weekly weighings, and addresses are given to the mothers at intervals on the feeding and care of infants.

I know personally that this Society is carrying out a most useful and valuable work, and should like to see it receive greater support, and similar restaurants started in other parts of the town would, in my opinion, be a great advantage.

TABLE XVII.
INFANTILE MORTALITY IN WARDS FROM
1903 to 1912.

WARD.	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	Average for 10 years.
St. Stephen's	123·8	177·0	156·1	157·3	126·8	137·8	101·9	101·8	157·3	113·5	135·3
Trinity ...	194·4	192·4	182·9	169·4	158·8	153·0	172·4	191·4	162·3	140·5	171·7
St. Michael's	97·5	132·4	138·3	133·0	130·2	120·1	102·4	101·5	96·4	81·4	113·3
St. John's	177·0	159·2	141·4	140·6	151·8	155·0	125·8	115·6	189·0	121·9	147·7
St. Silas's...	122·9	129·2	75·4	97·2	108·1	75·3	85·3	37·0	120·5	69·4	92·0
St. Paul's	161·7	251·8	153·8	127·8	140·4	146·7	137·0	135·1	194·6	122·3	157·1
St. Peter's	181·8	230·3	131·1	230·7	211·6	240·8	142·0	177·2	315·4	116·8	197·7
St. Mary's	229·2	227·9	176·1	257·6	262·1	185·1	171·7	226·0	280·5	115·9	213·2
St. Matthew's	171·5	195·6	130·9	133·5	144·8	143·3	114·0	141·0	180·6	115·7	147·0
St. Thomas's	132·0	215·0	132·0	135·8	125·4	127·3	114·2	129·4	172·1	105·4	138·8
Park ...	170·8	163·7	157·2	148·2	146·8	169·6	140·4	133·3	258·3	147·9	163·6
St. Luke's	166·0	189·8	206·8	224·5	204·9	147·8	127·7	173·0	212·2	168·5	182·1
St. Mark's	149·6	194·6	121·0	187·0	145·1	124·0	113·7	100·9	156·0	90·4	138·2
St. Andrew's	152·8	205·1	125·0	83·3	112·7	166·6	135·6	140·5	176·9	143·4	144·1
Borough.	158·2	191·9	146·2	155·9	151·7	149·3	127·4	136·0	186·9	119·2	152·2

TABLE XVIII.

POPULATIONS, ACREAGE, DENSITY AND AVERAGE
INFANTILE MORTALITY IN WARDS.

Name of Ward.	Population.	Acreage.	Density, <i>i.e.</i> , No. of Persons per Acre.	Average Infantile Mortality from 1903 to 1912.
St. Stephen's...	11009	1158'849	9'5	135'3
Trinity	9590	144'697	66'2	171'7
St. Michael's...	9350	630'361	14'8	113'3
St. John's	7795	102'319	76'1	147'7
St. Silas'	9612	993'871	9'6	92'0
St. Paul's	10056	123'476	81'4	157'1
St. Peter's.....	6872	134'198	51'2	197'7
St. Mary's.....	6393	171'282	37'3	213'2
St. Matthew's..	9950	112'344	88'5	147'0
St. Thomas' ...	12892	1721'649	7'4	138'8
Park	9857	654'017	15'0	163'6
St. Luke's ...	8374	154'275	54'2	182'1
St. Mark's.....	10656	404'842	26'3	138'2
St. Andrew's...	11133	925'427	12'0	144'1
Borough	133539	7431'607	17'9	152'2

TABLE XIX.

Deaths under One Year, arranged according to Days, Weeks, and Months.

CAUSE OF DEATH.	1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	1st week.	2nd Week.	3rd week.	4th week.	Under 1 month.	1 month to 2.	2 months to 3.	3 months to 4.	4 months to 5.	5 months to 6.	6 months to 7.	7 months to 8.	8 months to 9.	9 months to 10.	10 months to 11.	11 months to 12.	TOTAL.
All causes { Certified	29	13	13	9	3	3	1	71	18	12	15	116	29	22	19	13	22	9	16	18	15	15	15	309
Uncertified	7	1	2	1	..	..	..	11	..	2	..	13	2	1	..	..	..	..	1	..	..	..	1	18
Smallpox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Chicken-pox .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Measles .....	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	2	1	..	2	2	2	3	13
Scarlet Fever.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	1
Whooping-cough.....	..	..	..	..	..	..	..	..	..	..	..	..	1	1	3	2	1	..	1	1	3	..	1	14
Diphtheria and Croup.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Erysipelas ...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Meningitis.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	2
Abdominal Tuberculosis (b)	..	..	..	..	..	..	..	..	..	..	..	..	1	2	1	1	1	..	..	..	..	..	..	6
Other Tuberculous Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
Meningitis (not Tuberculous)	..	..	..	..	..	..	..	..	1	1	..	2	..	..	..	1	..	..	1	..	..	..	..	4
Convulsions	2	1	2	1	..	1	1	8	5	4	..	17	5	1	..	..	5	1	3	1	2	1	1	37
Laryngitis.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bronchitis .....	..	..	..	..	..	..	..	..	..	..	2	2	4	2	..	1	2	..	4	4	..	5	3	27
Pneumonia (all forms).....	..	..	..	..	..	..	..	..	..	..	..	..	2	2	1	2	3	6	5	4	3	4	2	34
Diarrhœa .....	..	..	..	..	..	..	..	..	..	..	2	2	3	3	5	2	5	..	1	3	4	1	2	31
Enteritis.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastritis.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Syphilis.....	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	2
Rickets.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Suffocation, overlying.....	..	..	..	..	..	..	..	..	..	..	1	1	1	..	..	1	..	..	..	..	..	..	..	3
Injury at birth .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Atelectasis.....	1	2	..	..	..	..	..	3	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	3
Congenital Malformations(c)	..	1	2	..	..	..	..	3	1	1	2	7	1	1	1	..	1	..	1	..	..	..	..	12
Premature birth.....	22	5	8	7	3	1	..	46	6	4	5	61	4	..	..	..	..	..	..	..	..	..	1	66
Atrophy, Debility and Marasmus.....	7	3	2	2	..	1	..	15	5	2	3	25	6	9	6	2	1	1	..	..	1	1	1	53
Other causes	4	2	1	..	..	..	..	7	..	1	..	8	2	1	1	1	1	..	2	1	..	1	..	18
TOTAL	36	14	15	10	3	3	1	82	18	14	15	129	31	23	19	13	22	9	17	18	15	15	16	327

TABLE XX.—Deaths under One Year from 1895—1912.

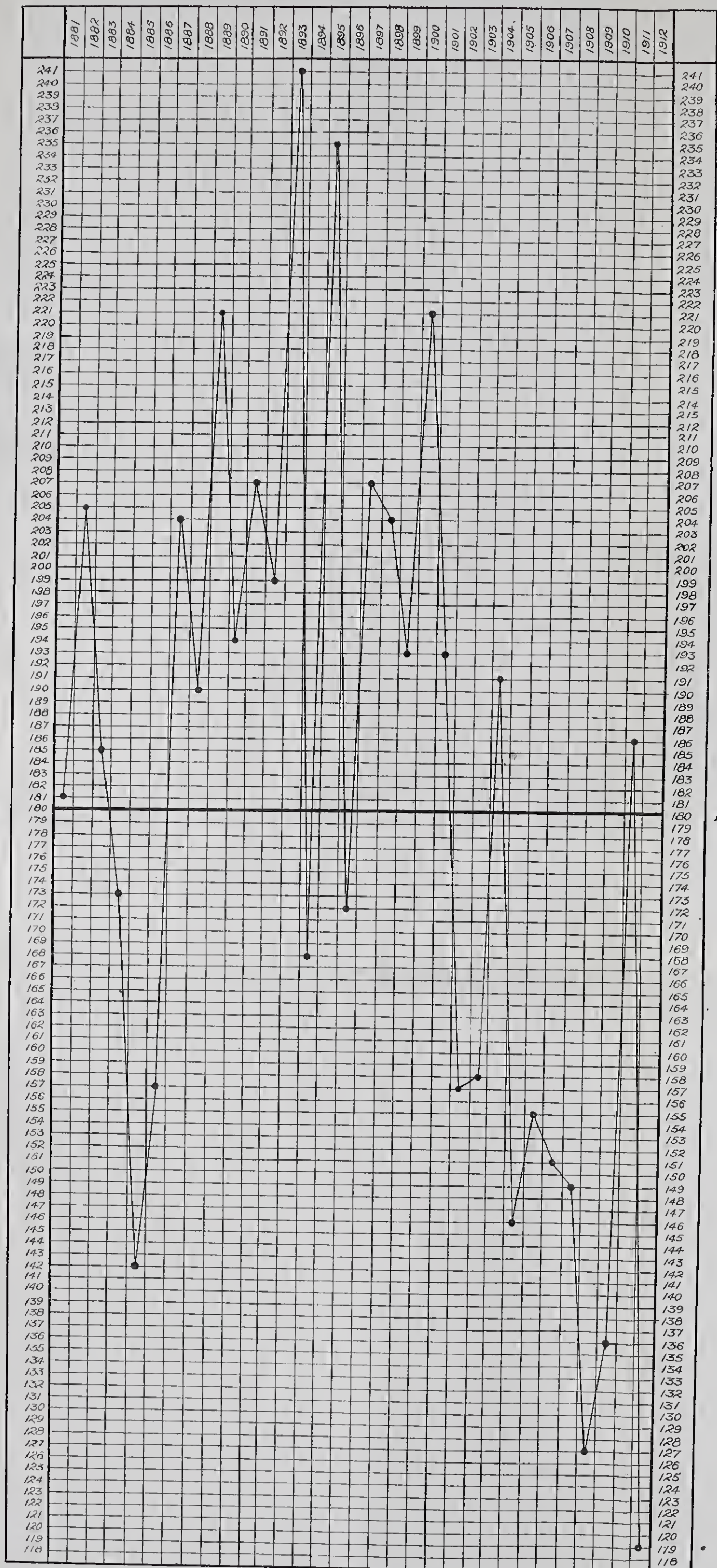
Disease.	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Zymotic Diseases.....	107	30	75	17	51	57	36	29	24	54	22	27	34	18	21	16	35	28
Diarrhoea	211	79	112	153	79	143	149	54	78	98	76	136	40	115	44	58	166	31
Lung Diseases	124	107	138	114	107	140	100	99	116	139	83	69	124	84	84	83	84	61
Convulsions	63	58	51	51	54	49	40	23	30	30	26	35	22	27	23	26	26	28
Tuberculosis	59	36	46	31	26	45	41	46	38	43	28	20	30	23	15	19	8	9
Debility, Atrophy, Marasmus, Inanition...	45	48	53	63	39	24	47	69	46	59	54	71	48	62	38	44	74	53
Premature Birth, Developmental.....	115	82	80	93	105	110	103	90	100	97	86	89	107	91	87	81	88	81
Dentition.....	26	14	19	12	21	17	18	20	7	10	10	17	17	4	7	..	5	9
All Others	170	157	178	216	223	177	122	100	84	65	82	69	86	86	81	74	48	27
All Causes	920	611	752	750	706	762	656	530	523	595	467	533	508	510	400	401	534	327

TABLE XXI.—Analysis of Deaths under One Year of Age for the last Eight Years.

	1905.		1906.		1907.		1908.		1909.		1910.		1911.		1912.	
	Deaths	Rate per 1000 Births	Deaths	Rate per 1000 Births	Deaths	Rate per 1000 Births	Deaths	Rate per 1000 Births	Deaths	Rate per 1000 Births	Deaths	Rate per 1000 Births	Deaths	Rate per 1000 Births	Deaths	Rate per 1000 Births
Zymotic Diseases	22	6.8	27	7.8	34	10.1	18	5.2	21	6.6	16	5.4	35	12.2	28	10.2
Diarrhœa	76	23.8	136	39.7	40	11.9	115	33.6	44	14.0	58	19.6	166	58.1	31	11.2
Lung Diseases .	83	25.9	69	20.1	124	37.4	84	24.5	84	26.7	83	28.1	84	29.4	61	22.2
Convulsions	26	8.1	35	10.2	22	6.5	27	7.9	23	7.3	26	8.8	26	9.1	28	10.2
Tuberculosis	28	8.7	20	5.8	30	8.9	23	6.7	15	4.7	19	6.4	8	2.8	9	3.2
Debility, Atrophy, Marasmus, Inanition	54	16.9	71	20.7	48	14.3	62	18.1	38	12.1	44	14.9	74	25.9	53	19.3
Premature Birth, Developmental.	86	26.9	89	26.0	107	31.9	91	26.6	87	27.7	81	27.4	88	30.8	81	29.5
Dentition	10	3.1	17	4.9	17	5.0	4	1.1	7	2.2	...	...	5	1.7	9	3.2
All Others	82	25.6	69	20.1	86	25.6	86	25.1	81	25.8	74	25.1	48	16.8	27	9.8
All Causes	467	146.2	533	155.9	508	151.7	510	149.3	400	127.4	401	136.0	534	186.9	327	119.2

CHART 1.

Infantile Mortality, 1881-1912.



Average

Average

Average for 32 Years-180.

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Notifications received under the Notification of Births Act.

TABLE XXII.

Month	Births Notified	Stillbirths Notified	Medical Men	Midwives	Parents	Others	Males	Females	Sex not stated
January	204	10	55	129	29	1	111	95	8
February	251	8	45	159	54	1	137	117	5
March	246	13	76	146	36	1	127	122	10
April	229	12	50	139	52	...	129	106	6
May	215	21	57	134	44	1	120	115	1
June	238	10	53	136	59	...	107	135	6
July	232	13	67	147	31	...	111	128	6
August	234	9	70	145	26	2	114	126	3
September	256	8	55	154	54	1	146	109	9
October	203	12	71	119	24	1	117	92	6
November	190	9	57	111	30	1	91	101	7
December	226	11	61	142	32	2	120	110	7
TOTAL	2724	136	717	1661	471	11	1430	1356	74

TABLE XXIII.

Deaths Under One Year to 1,000 Births Registered.															
28 Large Towns.	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	Average
London.....	167	160	149	141	131	144	131	132	115	113	107	102	128	90	129
Brighton ..	173	166	160	125	110	134	100	111	112	104	97	111	98	76	119
Portsmouth ..	197	155	162	151	113	141	133	130	124	98	95	104	125	82	129
Norwich	179	178	186	156	149	179	174	176	125	115	119	103	135	103	148
Plymouth.....	190	175	149	154	144	173	136	152	109	129	132	114	143	107	143
Bristol	158	133	130	130	116	133	122	128	102	126	100	91	139	102	122
Wolverhampton ..	184	206	162	133	141	152	136	140	130	132	138	107	136	87	142
Birmingham	191	199	186	156	158	195	155	168	148	145	134	130	164	112	160
Leicester	195	175	175	152	161	163	147	166	132	132	127	127	132	111	149
Nottingham	210	196	193	158	164	175	155	171	165	146	150	129	163	117	164
Derby	162	174	154	124	128	143	151	114	120	112	124	85	124	79	128
Birkenhead.....	183	160	181	148	155	180	127	151	109	136	124	135	135	97	144
Liverpool	198	186	187	162	159	196	154	171	145	142	144	139	155	125	161
Bolton	181	171	171	134	152	167	166	138	146	149	129	117	164	98	148
Manchester.....	206	189	198	152	168	187	157	166	147	151	134	132	155	121	161
Salford	209	207	204	155	166	193	150	160	141	153	142	130	149	128	163
Oldham	198	172	172	148	160	155	150	145	145	160	122	128	161	116	152
Blackburn	189	221	193	157	159	191	146	155	151	149	127	136	186	119	163
Preston	255	236	216	188	161	183	152	200	158	154	136	158	175	120	178
Huddersfield ..	152	132	131	137	120	136	119	135	97	111	95	99	134	95	121
Halifax.....	159	132	127	143	122	130	130	118	104	101	97	91	123	81	118
Bradford	181	141	168	138	147	166	144	152	125	143	116	127	139	99	142
Leeds	171	183	188	159	153	176	152	152	132	138	121	132	159	102	151
Sheffield	191	200	200	149	182	158	167	158	146	140	118	127	140	106	156
Hull	175	183	174	137	162	181	153	161	127	145	114	135	156	101	150
Sunderland	175	169	181	152	156	165	143	140	130	147	136	129	154	116	149
Newcastle-on-Tyne.	193	170	178	139	165	156	135	151	123	137	120	121	136	102	145
Cardiff	184	141	147	146	122	144	118	135	132	126	104	112	133	109	132
Average.....	186	175	171	147	147	164	143	148	129	133	121	120	144	103	

TABLE XXIV.

Showing Deaths, Death Rates, and Birth Rates in Wards for each Month.

JANUARY.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Croup	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuberculosis	All other Causes
St. Stephen's.....	26·6	17·3	...	...	...	...	...	...	...	2	2	12
Trinity	29·3	13·5	...	...	...	...	...	...	...	2	2	7
St. Michael's.....	16·5	8·2	...	...	...	...	...	...	...	1	1	5
St. John's	23·7	14·8	...	...	...	...	...	1	...	2	1	7
St. Silas'	12·3	5·1	...	...	...	...	...	...	...	1	...	4
St. Paul's	24·3	17·4	...	...	...	...	...	1	...	3	1	12
St. Peter's.....	32·3	12·9	...	...	...	...	...	...	1	2	...	6
St. Mary's	24·3	15·6	...	...	...	...	...	...	...	1	2	7
St. Matthew's	21·5	16·7	...	...	...	...	...	...	...	1	3	10
St. Thomas'	18·0	11·5	...	...	...	...	...	...	...	3	...	10
Park	23·3	9·8	...	...	...	...	...	...	...	...	2	6
St. Luke's.....	17·3	17·3	...	...	...	...	...	...	...	...	...	13
St. Mark's.....	26·5	12·0	1	...	...	...	...	...	...	2	2	4
St. Andrew's	24·4	20·3	...	...	...	...	...	1	...	2	1	16
Borough.....	22·6	13·5	1	...	...	...	...	3	1	22	17	119

FEBRUARY.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Croup	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuberculosis	All other Causes
St. Stephen's.....	18·5	21·0	...	...	...	...	...	...	...	7	2	8
Trinity	22·9	26·5	1	...	...	...	...	...	...	8	2	11
St. Michael's.....	16·3	12·6	...	1	...	...	...	...	...	3	2	4
St. John's	23·7	9·5	...	...	...	...	1	...	...	3	1	4
St. Silas'	11·0	12·1	...	...	...	...	...	...	...	3	...	8
St. Paul's	24·8	21·0	3	...	...	...	...	...	...	4	1	9
St. Peter's.....	15·5	29·3	...	...	...	...	...	...	...	3	...	12
St. Mary's	14·8	24·0	...	...	...	...	...	...	...	7	1	5
St. Matthew's	17·9	11·5	...	...	...	...	...	...	...	4	1	4
St. Thomas'	18·4	13·2	...	...	...	...	...	...	...	1	1	13
Park	32·8	13·1	...	...	...	...	...	...	...	3	...	7
St. Luke's.....	18·4	17·1	...	...	...	...	...	...	...	6	1	6
St. Mark's...	25·7	14·1	...	...	...	...	...	...	...	2	1	8
St. Andrew's	18·5	19·5	...	...	...	...	...	...	...	7	1	12
Borough.....	19·9	16·9	4	1	...	...	1	...	...	61	14	111

TABLE XXIV.—*continued.*

MARCH.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Group	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuberculosis	All other Causes
St. Stephen's.....	25'4	16'2	1	...	2	...	...	...	2	1	9
Trinity	24'8	16'8	...	...	2	...	...	1	6	1	5
St. Michael's.....	18'9	13'0	1	...	...	...	...	...	2	...	8
St. John's	11'8	5'9	...	...	...	...	1	...	1	...	5
St. Silas'	11'3	9'2	...	...	...	...	...	...	3	1	5
St. Paul's	23'2	11'6	2	...	...	...	...	...	2	1	5
St. Peter's	27'5	22'9	...	...	...	...	...	...	3	2	9
St. Mary's	19'1	24'3	...	...	...	...	...	...	5	1	8
St. Matthew's	20'3	7'1	...	...	...	...	...	...	2	1	5
St. Thomas'	17'2	10'7	...	...	...	...	...	...	1	2	10
Park	27'0	14'7	...	...	...	...	...	...	5	3	6
St. Luke's.....	25'3	17'3	...	...	...	...	...	...	5	...	8
St. Mark's.....	21'6	20'4	3	...	...	...	...	...	3	...	11
St. Andrew's.....	18'3	10'1	...	...	...	...	...	...	4	...	6
Borough.....	20'6	13'8	7	...	4	...	1	1	44	13	100	

APRIL.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Group	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuber- culosis	All other Causes
St. Stephen's.....	31'0	15'5	...	...	...	...	...	...	3	1	9
Trinity	19'8	15'1	...	...	...	...	...	...	6	1	6
St. Michael's.....	21'9	15'8	1	...	...	...	...	...	...	1	11
St. John's	12'2	18'4	2	...	...	...	...	...	2	3	5
St. Silas'	15'9	3'1	...	...	...	...	...	...	1	...	5
St. Paul's	20'3	23'9	4	...	...	...	...	...	6	1	9
St. Peter's	26'7	15'0	2	...	...	...	...	...	1	2	4
St. Mary's.....	14'3	16'1	...	...	...	...	...	...	4	...	5
St. Matthew's	22'3	17'3	...	...	...	...	...	...	3	2	9
St. Thomas'	19'5	9'3	...	...	...	...	...	...	2	1	8
Park	20'3	19'0	1	...	...	...	...	...	4	...	9
St. Luke's.....	17'9	15'1	1	...	...	...	...	...	3	1	7
St. Mark's.....	19'9	18'6	...	...	...	...	...	1	6	...	8
St. Andrew's.....	26'3	14'7	...	...	...	...	...	...	5	2	7
Borough.....	20'8	15'1	11	1	46	15	102

TABLE XXIV.—*continued.*

MAY.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Group	Typhoid fever	Diphtheria	Diarrhoea	Lung Diseases	Tuberculosis	All other Causes
St. Stephen's.....	13'8	17'3	..	..	..	..	..	..	..	2	13
Trinity	18'0	12'4	1	..	..	..	..	..	5	1	6
St. Michael's	11'8	15'6	..	..	1	..	..	..	2	..	6
St. John's	19'2	22'2	1	..	2	..	..	..	1	1	10
St. Silas'	14'4	10'3	..	..	..	..	..	..	2	..	8
St. Paul's	27'8	11'6	1	..	..	..	..	..	3	..	6
St. Peter's	14'5	14'5	..	..	..	..	..	..	3	..	6
St. Mary's	29'6	29'6	2	..	..	..	..	..	8	1	6
St. Matthew's	29'9	22'7	1	..	..	..	..	..	6	2	10
St. Thomas'	20'5	9'0	1	..	..	..	..	..	4	1	6
Park	18'4	17'2	..	..	1	..	..	1	4	..	8
St. Luke's	22'6	9'3	..	..	..	..	..	..	2	..	5
St. Mark's	26'2	15'6	..	..	..	..	..	..	2	3	8
St. Andrew's...	18'3	9'1	..	..	..	..	1	..	1	1	6
Borough.....	20'2	14'5	7	...	4	...	1	1	43	12	104	

JUNE.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Group	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuberculosis	All other Causes
St. Stephen's.....	21'5	13'1	..	..	3	..	..	..	2	..	..	6
Trinity.....	16'3	4'6	1	1	..	..	..	..	1	1	..	2
St. Michael's.....	15'8	9'7	..	..	..	..	..	..	..	..	..	8
St. John's.....	21'4	10'7	..	..	..	..	..	..	1	1	..	5
St. Silas'.....	11'7	8'5	..	..	..	..	..	..	..	2	..	6
St. Paul's.....	25'1	11'0	..	..	..	..	..	..	1	1	..	8
St. Peter's.....	25'0	11'6	1	..	..	..	..	..	3	..	..	3
St. Mary's.....	16'2	14'3	..	1	..	..	..	..	1	1	..	5
St. Matthew's.....	16'1	12'3	2	..	..	..	..	..	3	..	..	5
St. Thomas'.....	16'1	15'3	2	..	1	..	..	..	3	..	..	12
Park.....	11'4	13'9	..	..	..	..	..	..	2	2	..	7
St. Luke's.....	23'4	19'3	2	..	..	..	..	1	1	..	..	10
St. Mark's.....	23'6	9'8	..	..	..	..	..	2	..	2	..	4
St. Andrew's.....	20'0	21'0	1	..	..	..	..	1	3	2	..	13
Borough.....	18'6	12'7	9	2	4	..	..	1	3	21	12	94

TABLE XXIV.—*continued.*

JULY.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Croup	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuber- culosis	All other Causes
St. Stephen's.. . . .	27·7	9·2	2	...	1	...	...	...	1	...	...	4
Trinity	28·2	15·8	...	...	...	...	...	...	1	4	1	8
St. Michael's.....	22·4	10·6	...	...	...	...	...	1	...	...	...	8
St. John's	22·2	2·9	...	...	...	...	...	...	...	1	...	4
St. Silas'	15·4	9·2	...	...	...	...	...	...	...	1	...	8
St. Paul's	19·7	12·7	...	...	...	...	...	...	2	1	...	8
St. Peter's.....	14·5	25·8	1	...	...	...	...	...	1	1	1	13
St. Mary's.....	27·8	15·6	...	...	...	...	1	...	1	3	1	3
St. Matthew's	21·5	9·5	...	...	...	...	...	...	3	...	...	5
St. Thomas'	11·5	11·5	2	...	1	...	...	...	...	...	1	10
Park	27·0	8·5	...	...	...	...	...	2	1	...	...	4
St. Luke's	22·6	10·6	2	...	...	...	...	...	1	...	...	5
St. Mark's	24·1	14·4	...	...	...	...	...	...	...	...	1	11
St. Andrew's.....	21·3	13·2	1	...	...	...	...	1	3	1	...	7
Borough.....	21·5	11·9	8	...	2	...	1	1	6	20	7	98

AUGUST.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Croup	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuberculosis	All other Causes.
St. Stephen's.....	17'5	12'7	...	...	...	...	...	...	1	1	...	9
Trinity	29'3	10'1	...	...	...	...	...	...	1	...	2	6
St. Michael's.....	11'8	7'0	...	...	...	...	...	...	...	1	...	5
St. John's	17'8	17'8	...	...	...	...	1	...	...	4	...	7
St. Silas'	13'4	7'2	...	...	...	...	...	...	...	1	...	6
St. Paul's	22'0	17'4	...	...	...	...	...	...	1	2	3	9
St. Peter's	27'4	22'6	...	...	...	...	...	...	1	...	1	12
St. Mary's	22'6	17'4	...	...	...	...	...	...	...	1	1	8
St. Matthew's	28'7	16'7	1	...	...	...	...	...	1	3	...	10
St. Thomas'	12'3	12'3	...	...	...	...	...	...	2	2	2	10
Park	22'1	8'5	...	...	...	...	...	...	1	1	1	6
St. Luke's	16'0	12'0	1	...	...	...	...	...	1	...	1	6
St. Mark's	8'5	9'6	...	...	...	...	...	1	...	...	1	7
St. Andrew's.....	21'3	11'2	...	...	...	...	...	...	1	...	...	10
Borough.....	19'0	12'6	2	...	...	...	1	1	9	17	12	111

TABLE XXIV.—continued.

SEPTEMBER.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Croup	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuberculosis	All other Causes
St. Stephen's.....	25·1	9·5	...	...	...	...	...	...	...	...	1	7
Trinity	26·8	7·0	...	...	...	...	...	...	1	...	...	6
St. Michael's.....	20·7	2·4	...	...	...	...	...	...	...	1	...	4
St. John's	36·8	15·3	1	...	...	...	...	...	...	1	...	8
St. Silas'	14·9	5·3	...	...	1	...	...	...	...	1	...	3
St. Paul's	22·7	15·5	...	...	...	...	...	1	...	4	...	8
St. Peter's	18·3	13·3	...	...	...	...	...	...	...	...	2	6
St. Mary's	19·7	12·5	...	...	...	...	...	...	1	1	...	5
St. Matthew's	18·5	6·2	...	...	1	...	...	...	...	...	1	3
St. Thomas'	16·1	5·1	...	...	...	...	...	...	1	2	...	4
Park	19·0	5·0	...	...	...	...	...	...	...	1	1	2
St. Luke's	17·9	16·5	...	...	...	...	...	...	...	...	2	10
St. Mark's	21·1	7·4	...	...	...	...	...	...	1	...	...	5
St. Andrew's.....	19·9	10·5	...	...	1	...	...	...	...	...	1	8
Borough.....	20·9	8·9	1	...	3	...	...	1	4	11	8	79

OCTOBER.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Croup	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases.	Tuberculosis.	All other Causes.
St. Stephen's.....	19·6	10·4	...	...	...	...	...	...	...	4	...	5
Trinity	22·6	13·5	1	...	...	...	...	...	2	4	...	5
St. Michael's.....	13·0	4·7	...	...	...	...	...	...	...	...	...	4
St. John's	29·6	20·7	...	...	...	...	...	...	...	5	...	9
St. Silas'	10·3	4·1	...	...	...	...	...	...	...	...	...	4
St. Paul's	31·3	18·5	...	...	...	...	...	...	1	3	...	12
St. Peter's	17·7	6·4	...	...	...	...	...	...	...	1	1	4
St. Mary's	15·6	20·9	...	...	...	...	...	...	1	5	2	4
St. Matthew's	25·1	13·1	...	...	1	...	...	1	...	...	1	8
St. Thomas'	16·4	12·3	...	...	1	...	...	...	1	2	1	10
Park	15·9	17·3	...	...	...	...	...	...	1	3	2	8
St. Luke's	16·0	13·3	...	...	...	...	...	...	...	4	...	6
St. Mark's	24·1	9·6	...	...	...	...	...	...	...	...	1	8
St. Andrew's.....	21·3	14·2	...	...	...	...	...	...	...	1	1	12
Borough.....	19·8	12·5	1	...	2	...	...	...	7	32	9	99

TABLE XXIV.—*continued.*

NOVEMBER.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Wp g Cgh	Croup	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuber- culosis.	All other Causes
St. Stephen's.....	25.1	9.5	...	...	...	...	...	...	1	2	5
Trinity	15.2	14.0	...	...	1	...	...	...	1	1	9
St. Michael's.....	15.9	7.3	...	...	...	...	...	...	...	...	6
St. John's	15.3	12.2	...	...	...	...	...	...	1	...	9
St. Silas'	9.4	4.2	...	...	...	...	...	...	...	1	5
St. Paul's ...	20.3	9.6	...	...	...	...	...	...	...	1	7
St. Peter's.. ..	13.3	25.0	...	...	...	1	...	...	3	1	10
St. Mary's	19.7	12.5	...	...	1	...	...	...	1	...	5
St. Matthew's	27.2	16.1	...	...	...	...	...	1	1	...	11
St. Thomas'	15.3	14.4	1	...	...	1	...	...	8	1	8
Park	12.6	10.1	...	...	...	...	...	1	2	...	5
St. Luke's	15.0	19.2	...	...	1	...	...	...	4	1	7
St. Mark's	17.4	6.2	...	...	...	...	...	...	1	1	5
St. Andrew's.....	12.6	9.5	...	...	...	...	...	...	4	...	5
Borough.....	16.7	11.8	1	...	3	...	2	...	2	27	9	97

DECEMBER.	Birth Rate.	Death Rate.	DEATHS.									
			Measles	Scarlet Fever	Whooping Cough	Croup	Typhoid Fever	Diphtheria	Diarrhoea	Lung Diseases	Tuber- culosis	All other Causes
St. Stephen's.....	16.1	19.6	...	...	...	...	...	2	5	3	7
Trinity	23.7	26.0	...	...	...	...	...	2	8	...	13
St. Michael's.....	21.2	16.5	...	...	...	...	...	...	6	2	6
St. John's	13.3	14.8	...	...	...	...	...	1	5	...	4
St. Silas'	10.3	10.3	...	...	...	...	...	...	3	1	6
St. Paul's	17.4	19.7	...	...	1	...	...	...	6	...	10
St. Peter's.....	19.4	30.7	...	...	...	...	...	1	6	1	11
St. Mary's.....	19.1	17.4	...	...	4	...	...	...	2	...	7
St. Matthew's	13.1	17.9	...	...	...	...	...	...	3	2	10
St. Thomas'	15.6	10.7	...	...	...	...	...	...	5	1	8
Park	14.7	17.3	...	...	...	...	...	...	8	1	6
St. Luke's.....	20.0	30.7	...	...	...	...	...	...	8	...	15
St. Mark's.....	18.0	14.5	...	...	...	...	...	1	3	1	7
St. Andrew's.....	15.2	13.2	...	...	...	...	...	...	2	2	9
Borough.....	16.8	17.8	...	...	5	...	...	7	70	14	119

ZYMOTIC DISEASES.

The Zymotic Death-rate during 1912 was 1.0 per 1,000.

The Death-rates from the principal Zymotic diseases per 1,000 living during 1912. in England and Wales, were as follows :—

England and Wales	0.83
95 Great Towns (including London)	1.04
146 Smaller Towns	0.85

TABLE XXV.

	33 Large Towns.	Black-burn.
Seven Zymotic Diseases	1.21	1.03
Smallpox.....	0.001	0.00
Measles	0.47	0.38
Scarlet Fever	0.06	0.02
Whooping Cough	0.24	0.20
Typhoid Fever	0.05	0.05
Diarrhœa and Epidemic Enteritis	0.25	0.29
Diphtheria	0.14	0.06

Regarding the Zymotic Diseases which are compulsorily notifiable, it will be seen, on reference to Table XXVII., that 298 notifications were sent to me by medical practitioners under the Infectious Diseases Notification Act, and 250 notifications were sent to me under the Public Health (Tuberculosis) Regulations.

This is less by 109 than the number received during 1911.

Of these 548 notifications, 116, or 21.7 per cent., were Scarlet Fever.

The largest number of notifications received were Pulmonary Tuberculosis, namely, 250 notifications out of 548 notifications, or 45.6 per cent.

The next most frequently notified diseases were, in order, Scarlet Fever, Erysipelas, Diphtheria, Enteric Fever, Puerperal Fever, Poliomyelitis, and Cerebro-Spinal Meningitis.

Regarding the age-periods of these 548 notifications, 61 occurred between the ages of 1 and 5 years, 116 between 5 and 15 years, 87 between 15 and 25 years, and 284 over 25 years.

The greatest number of notifications above the age of 25 years were Phthisis and Erysipelas.

The greatest amount of notifiable infection occurred in St. Andrew's Ward, and the least amount in St. Matthew's Ward.

NOTIFICATION FEES.

The total cost in fees paid to medical men for notifying cases of Infectious Diseases during 1912 was £62 2s.

This was £25 2s. 6d. less than the amount paid for that purpose during 1911.

TABLE XXVI.

Shewing number of cases of Infectious Diseases notified from 1894 to 1912.

Disease.	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Smallpox	13	...	...	...	...	...	23	...	49	92	2	4	...	1	...	2	1	...	..
Scarlet Fever...	156	224	287	185	347	615	1476	1117	494	339	458	1578	849	544	595	1013	795	343	116
Diphtheria.....	38	31	25	15	77	229	334	284	83	132	60	157	166	150	100	102	96	107	55
Enteric Fever	129	119	143	179	228	233	163	131	127	97	111	90	82	61	85	69	46	49	26
Typhus .....	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	336	375	455	380	652	1078	1996	1532	753	660	631	1829	1097	756	780	1186	938	499	197

TABLE XXVII.
Cases of Infectious Disease notified during the Year 1912.

NOTIFIABLE DISEASE.	Cases notified in whole District.							Total Cases notified in each Locality.											Total Cases removed to Hospital.				
	At Ages—Years.							St. Stephen's	Trinity	St. Michael's	St. John's	St. Silas'	St. Paul's	St. Peter's	St. Mary's	St. Matthew's	St. Thomas' Park	St. Luke's		St. Mark's	St. Andrew's		
	At all Ages	Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65															65 and upwards	
Small-pox .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cholera .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diphtheria (including Membranous Group)	55	...	17	28	7	2	1	...	2	3	3	6	3	8	4	3	3	2	2	7	9	31	
Erysipelas	87	2	1	3	8	30	35	8	1	8	5	3	6	7	8	6	5	10	4	7	9	78	
Scarlet Fever	116	2	32	68	5	9	...	...	10	8	8	3	20	12	6	4	4	5	6	5	7	18
Typhus Fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	26	...	2	3	6	11	4	...	1	3	...	6	...	1	...	3	1	6	1	1	2	20	
Relapsing Fever	9	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	2	2	...	...	...
Puerperal Fever	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Meningitis	4	1	2	1	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	1	1	...
Poliomyelitis .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	*250	1	...	13	60	121	54	1	22	10	15	14	22	19	26	16	10	22	13	26	22	32	
TOTALS	548	6	55	116	87	181	94	9	37	32	31	33	51	47	41	34	24	46	34	25	50	63	161

* 23 persons notified twice; 2 three times; 1 four times.

MEASLES.

Nine hundred and thirty-eight cases of Measles were reported from the Schools during the year, compared with 942 cases during 1911, 732 during 1910, and 1,470 during 1909.

The reported cases and deaths occurred in the months in the following numbers :—

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Cases Reported	16	87	126	237	99	190	140	2	2	5	25	9	938
Deaths ...	1	4	7	11	7	9	8	2	1	1	1	...	52

In 1896 there were 3 cases notified to each death.

.. 1897	..	13	..	..
.. 1898	..	9	..	..
.. 1899	..	17	..	..
.. 1900	..	24	..	..
.. 1901	..	15	..	..
.. 1902	..	15	..	..
.. 1903	..	18	..	..
.. 1904	..	40	..	..
.. 1905	..	24	..	..
.. 1906	..	11	..	..
.. 1907	..	19	..	..
.. 1908	..	28	..	..
.. 1909	..	35	..	..
.. 1910	..	18	..	..
.. 1911	..	33	..	..
.. 1912	..	18	..	..

DEATHS IN AGE PERIODS.

0 to 1	1 to 2	2 to 5	5 to 10	Total.
13	21	15	3	52

It will, therefore, be seen that Measles was present in the greatest amount during the first six months of the year. The worst month was April.

The death-rate from Measles, during 1912, was 0.38, as compared with 0.21 in 1911.

No School was closed during the year on account of Measles.

DEATHS AND DEATH RATES FROM MEASLES
1871—1912.

TABLE XXVIII.

Year	Total Deaths	Death Rate	Year	Total Deaths	Death Rate
1871	61	0.8	1892	8	0.06
1872	31	0.3	1893	140	1.1
1873	119	1.4	1894	13	0.01
1874	142	1.7	1895	324	2.5
1875	29	0.3	1896	36	0.2
1876	167	1.9	1897	143	1.0
1877	48	0.5	1898	50	0.38
1878	25	0.2	1899	40	0.29
1879	37	0.3	1900	76	0.55
1880	74	0.7	1901	94	0.72
1881	9	0.08	1902	77	0.59
1882	167	1.5	1903	53	0.40
1883	1	0.009	1904	60	0.45
1884	92	0.8	1905	42	0.32
1885	1	0.009	1906	63	0.48
1886	195	1.7	1907	45	0.34
1887	76	0.6	1908	15	0.11
1888	117	1.0	1909	41	0.30
1889	188	1.6	1910	39	0.29
1890	15	0.1	1911	28	0.21
1891	173	1.4	1912	52	0.38

SCARLET FEVER.

The number of cases notified during the year 1912 was 116, compared with 343 during 1911, and 795 during 1910.

It will thus be seen that the amount of Scarlet Fever in Blackburn during 1912 was remarkably small. In fact, a smaller number of cases were notified than in any year since 1881,—a period of thirty years.

The following were the cases and deaths in age-periods during 1912 :—

Age period	0-1	1-2	2-5	5-10	10-15	15-20	20-25	25-35	35-45	TOTAL
Cases ...	2	4	28	51	17	4	1	6	3	116
Deaths ..	1	1	1	...	...	...	...	...	...	3

As in previous years, these figures show—

1. That during 1912 the incidence and mortality from Scarlet Fever below the age of one year were small.
2. That this disease is most prevalent between the ages of 1 and 5, and 5 and 10 years (83 cases out of 116 cases, or 71.5 per cent.).
3. Also that between the two last-named age-periods the greatest number of deaths occurred (2 deaths out of 3 deaths from this disease, or 66.6 per cent.).
4. That there is a diminished incidence and mortality after the age of 10 years.

The following are the cases, arranged in months and quarters, for 1912, and compared with similar cases for 1911 :—

	Jan.	Feb.	Mar.	April.	May.	June.
1912 :	20	14	9	3	8	10
1911 :	60	35	27	24	31	23

	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912 :	2	5	6	12	16	11
1911 :	44	19	17	34	18	11

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.
1912 :	43	21	13	39
1911 :	122	78	80	63

The percentage of cases of this disease removed to the Hospital in the different months was as follows :—

Jan.	Feb.	Mar.	April.	May.	June.
60.0	71.4	66.6	100.0	50.0	80.0
July.	Aug.	Sept.	Oct.	Nov.	Dec.
50.0	100.0	50.0	83.3	50.0	72.7

Also the number of cases in individual houses was as follows :—

In	1	house	there	were	5	cases.
„	2	houses	there	were	3	„
„	8	„	„	2	„	
„	88	„	there	was	1	case.

One case occurred in the Fever Hospital.

No milk supply had any effect in causing the disease to spread during the year.

The usual preventive measures were adopted in every case of Scarlet Fever notified during the year, and these measures were described fully in my Annual Health Report for 1905.

The following Table indicates the weekly and daily average number of notifications of Scarlet Fever throughout the year.

TABLE XXIX.
Analysis of Cases of Scarlet Fever.

Week Ending.	No. of Cases Notified Weekly	Total Cases Notified during Year	Average Cases Notified Weekly	Average Cases Notified Daily	Week Ending	No. of Cases Notified Weekly	Total Cases Notified during Year	Average Cases Notified Weekly	Average Cases Notified Daily
Jan. 6	3	3	3'0	0'5	July 6	1	65	2'3	0'3
„ 13	11	14	7'0	1'0	„ 13	...	65	2'3	0'3
„ 20	1	15	5'0	0'7	„ 20	..	65	2'2	0'3
„ 27	4	19	4'7	0'7	„ 27	1	66	2'2	0'3
Feb. 3	2	21	4'2	0'6	Aug. 3	...	66	2'1	0'3
„ 10	1	22	3'6	0'5	„ 10	1	67	2'0	0'3
„ 17	3	25	3'5	0'5	„ 17	1	68	2'0	0'3
„ 24	4	29	3'6	0'5	„ 24	...	68	2'0	0'3
Mar. 2	5	34	3'7	0'5	„ 31	3	71	2'0	0'3
„ 9	2	36	3'6	0'5	Sept. 7	1	72	2'0	0'3
„ 16	2	38	3'4	0'5	„ 14	1	73	1'9	0'3
„ 23	4	42	3'5	0'5	„ 21	1	74	1'9	0'3
„ 30	1	43	3'3	0'5	„ 28	1	75	1'9	0'3
Apr. 6	2	45	3'2	0'4	Oct. 5	4	79	1'9	0'3
„ 13	...	45	3'0	0'4	„ 12	1	80	1'9	0'3
„ 20	...	45	2'8	0'4	„ 19	2	82	1'9	0'3
„ 27	1	46	2'7	0'4	„ 26	5	87	2'0	0'3
May 4	3	49	2'7	0'4	Nov. 2	4	91	2'0	0'3
„ 11	3	52	2'7	0'4	„ 9	5	96	2'1	0'3
„ 18	2	54	2'7	0'4	„ 16	1	97	2'1	0'3
„ 25	...	54	2'5	0'3	„ 23	4	101	2'1	0'3
June 1	...	54	2'4	0'3	„ 30	4	105	2'1	0'3
„ 8	3	57	2'4	0'3	Dec. 7	3	108	2'2	0'3
„ 15	5	62	2'5	0'3	„ 14	4	112	2'2	0'3
„ 22	2	64	2'5	0'3	„ 21	2	114	2'2	0'3
„ 29	...	64	2'4	0'3	„ 28	1	115	2'2	0'3

SCARLET FEVER.

TABLE XXX.

Year.	Cases notified.	Deaths.	Mortality per 1,000 population.
1878	.....	345	3'39
1879	.....	175	1'77
1880	.....	74	'72
1881	103	23	'22
1882	331	47	'44
1883	275	41	'38
1884	211	45	'41
1885	181	23	'20
1886	422	26	'23
1887	1695	157	1'38
1888	829	175	1'51
1889	737	123	1'05
1890	324	32	'26
1891	196	13	'10
1892	176	13	'10
1893	190	4	'03
1894	156	10	'07
1895	224	8	'06
1896	287	9	'06
1897	185	7	'05
1898	347	16	'12
1899	615	14	'10
1900	1476	83	'65
1901	1117	58	'44
1902	494	31	'23
1903	339	13	'09
1904	458	13	'09
1905	1578	76	'58
1906	849	33	'25
1907	544	21	'15
1908	595	20	'15
1909	1013	53	'40
1910	795	27	'20
1911	343	10	'07
1912	116	3	'02

TYPHOID OR ENTERIC FEVER.

The number of cases notified during the year was 26, compared with 49 during 1911, 46 during 1910, and 69 during 1909.

This is the smallest number of cases of Typhoid Fever notified in Blackburn, in one year, on record, and it represents an extremely satisfactory state of affairs.

I attribute this marked diminution to the vigorous crusade which has been adopted for many years in remedying insanitary conditions continuously.

There were 7 deaths during 1912, compared with 8 deaths during 1911, and 9 during 1910.

Age Periods.	Cases Notified.	Deaths.	Case Mortality Per Cent.
0—1	0	0	0.0
1—2	0	0	0.0
2—3	0	0	0.0
3—4	1	0	0.0
4—5	1	0	0.0
5—6	0	0	0.0
6—7	0	0	0.0
7—8	0	0	0.0
8—9	0	0	0.0
9—10	0	0	0.0
10—15	3	0	0.0
15—20	2	0	0.0
20—25	4	1	25.0
25—35	6	3	50.0
35—45	5	3	60.0
45—55	2	0	0.0
55 and upwards ...	2	0	0.0
	<hr/> 26	<hr/> 7	<hr/> 26.9

Out of the 26 cases notified, two had eaten cockles.

There is no reason to believe that the consumption of shell-fish aided the spread of Typhoid Fever in Blackburn during the year 1912.

The districts in which these 26 cases occurred will be seen by reference to the map at the end of the Report.

The drains at the 25 houses where these 26 cases occurred were tested. Defects were found at 15 houses, and steps were taken to remedy the same immediately.

The type of sanitary convenience at the infected houses was as follows :—

Water Closets.	Pail Closets.	Midden.
Fresh-water.	Slop-water.	
15	1	8
		1

The following is an Analysis of the Milk Supplies at the various houses at which Typhoid Fever occurred during 1912 :—

24 supplies with 1 case of Typhoid in each supply.

2	„	2 cases	„	„
---	---	---------	---	---

The following is an Analysis of the Water Supply to the various houses at which Typhoid Fever occurred during 1912 :—

Fishmoor Reservoir.	Guide Reservoir.	Audley Reservoir.
17	6	3

TABLE XXXI.

TYPHOID FEVER IN WARDS AND QUARTERS DURING 1912.
(NOTIFICATIONS).

Wards.	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Totals
St. Stephen's .....	...	1	...	...	1
Trinity .....	...	2	...	1	3
St. Michael's .....	...	...	...	...	...
St. John's	2	1	3	...	6
St. Silas' .....	...	...	...	...	...
St. Paul's .....	...	1	...	...	1
St. Peter's .....	...	...	...	...	...
St. Mary's .....	...	...	2	1	3
St. Matthew's .....	...	...	...	1	1
St. Thomas'	5	1	...	...	6
Park ... ..	...	1	...	...	1
St. Luke's ... ..	...	...	1	...	1
St. Mark's .....	...	1	...	...	1
St. Andrew's	1	1	...	...	2
Totals	8	9	6	3	26

The monthly notifications of this disease during 1912 were as follows:—

Jan.	Feb.	Mar.	April.	May.	June.
—	4	4	2	3	4
July.	Aug.	Sept.	Oct.	Nov.	Dec.
4	1	1	—	2	1

Total : 26.

Forty-seven specimens of Blood were examined during the year for Typhoid Bacilli, with the following results:—

Positive	12
Negative	32
Doubtful	3

The cases notified in the four quarters for the years 1899 to 1912 were as follows:—

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.
1899	84	26	42	81
1900	34	25	27	77
1901	35	24	29	43
1902	33	26	18	50
1903	39	23	16	19
1904	26	15	13	57
1905	20	18	10	42
1906	25	11	3	43
1907	20	10	12	19
1908	18	20	12	35
1909	27	9	10	23
1910	12	4	8	22
1911	9	7	10	23
1912	8	9	6	3

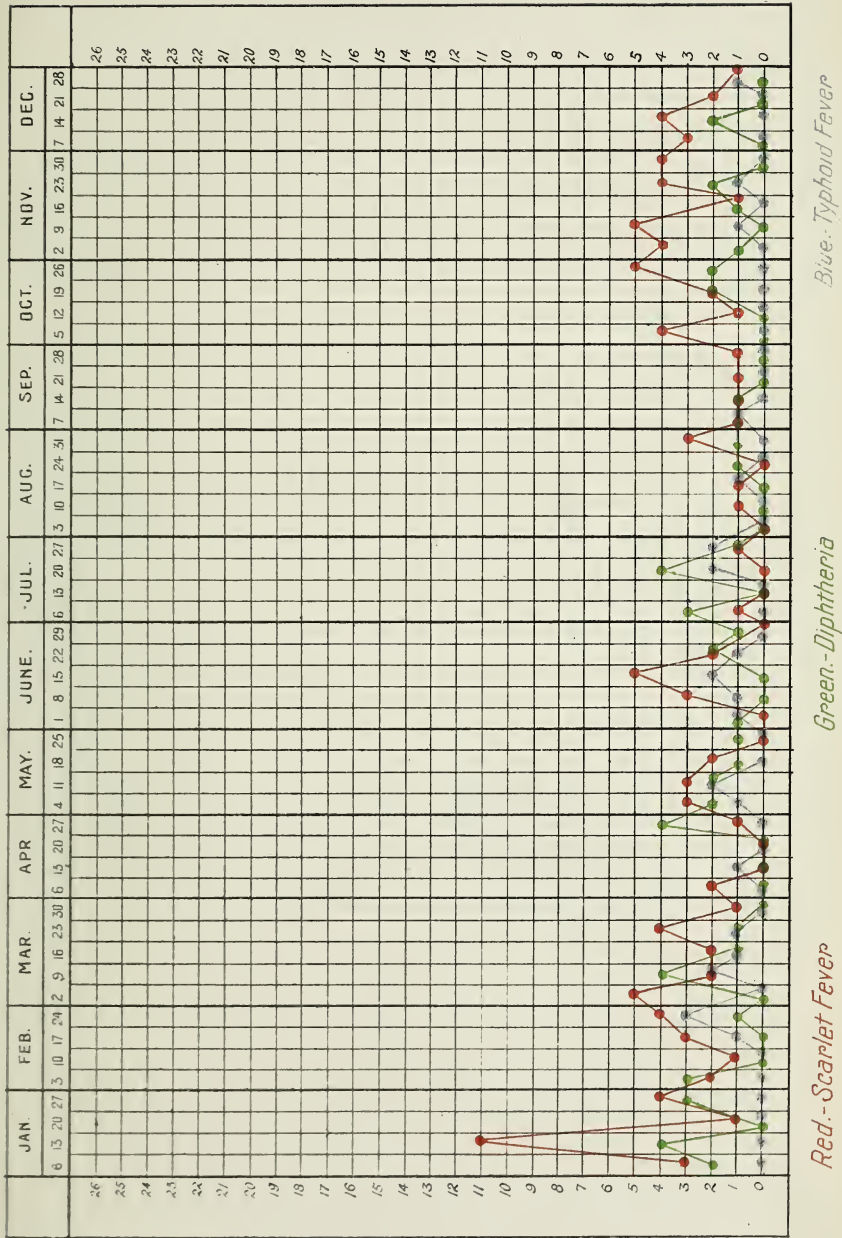
TYPHOID FEVER.

TABLE XXXII.

Year	Cases Notified.	Deaths.	Mortality per 1,000 Population.
1881	289	68	·65
1882	210	50	·47
1883	442	84	·78
1884	268	67	·61
1885	130	28	·25
1886	105	34	·30
1887	153	41	·36
1888	146	39	·33
1889	111	20	·17
1890	121	37	·31
1891	106	24	·19
1892	79	32	·26
1893	161	27	·22
1894	129	32	·26
1895	119	28	·22
1896	143	33	·26
1897	179	35	·28
1898	228	30	·23
1899	233	40	·31
1900	163	30	·23
1901	131	17	·13
1902	127	23	·17
1903	97	15	·11
1904	111	21	·16
1905	90	15	·11
1906	82	14	·10
1907	61	13	·09
1908	85	14	·10
1909	69	18	·13
1910	46	9	·06
1911	49	8	·06
1912	26	7	·05

The following Table gives particulars of all the cases of Typhoid Fever which were notified during the year 1912 :—

CHART 2.—INFECTIOUS DISEASES.



TYPHOID FEVER.—Table XXXIII.

No.	Age.	Days ill before notifi- cation after 1st case.	Closet Accommodation					CONDITION OF			Other Remarks.
			Cases of Typhoid occurring in notifi. same house after 1st case.	W.C.	Pail	Ashpit	Slopwater	Yard.	Back road.	Drainage.	
1	21	5	..	1	1	...	...	Flagged	Unpaved	Defective	
2	25	12	...	...	1	1	...	Flagged and cobble	Paved	Defective	
3	37	18	...	1	1	...	...	Flagged	Paved	Good	
4	13	9	...	...	...	1	...	Flagged	Unpaved	Defective	
5	12	7	Another case notified same day	1	1	...	...	Flagged	Flagged	Defective	
6	20	14	...	...	1	1	...	Flagged and cobble	Unpaved	Defective	
7	28	15	...	...	1	1	...	Flagged	Paved	Defective	
8	56	14	...	1	1	...	...	Flagged	Paved	Defective	
9	32	10	...	...	1	1	...	Flagged	Paved	Defective	
10	38	28	...	1	1	...	...	Flagged	Paved	Good	

Closet
Accommodation

No.	Age.	Days ill before notification after 1st case.	Cases of Typhoid occurring in same house	W.C.	Pail.	Asphalt.	Slopwater	CONDITION OF			Other Remarks.
								Yard.	Back road.	Drainage.	
11	15	4	...	1	...	...	...	Flagged and Cobble	Paved	Good	
12	20	11	...	1	...	...	...	Flagged	Paved	Defective	
13	38	8	...	...	1	...	...	Flagged	Cobble	Defective	
14	17	10	...	1	...	...	...	Flagged	Paved	Good	
15	49	11	...	...	1	...	...	Flagged and cobble	Paved	Good	
16	20	13	...	1	...	...	...	Flagged and cobble	Paved	Good	
17	28	6	...	1	...	...	...	Flagged and cobble	Cobble	Good	
18	35	15	...	1	...	...	...	Flagged and cobble	Flagged	Defective	
19	63	17	...	...	...	...	1	Flagged and Gardened	Unpaved	Good	
20	30	11	...	1	...	...	...	Flagged	Paved	Defective	

Closest
Accommodation

No.	Age.	Days ill before notifi- cation	Cases of Typhoid in same house after 1st case.	W.C.	Pail.	Ashpit.	Slopwater.	CONDITION OF			Other Remarks.
								Vard.	Back road.	Drainage.	
21	4	7	...	...	1	...	...	Flagged and cobbled	Paved	Defective	
22	47	12	...	1	...	...	...	Flagged	Paved	Good	
23	29	10	...	...	1	...	...	Flagged	Unpaved	Defective	
24	41	6	...	1	...	...	...	Flagged	Paved	Defective	
25	3	8	...	1	...	...	...	Flagged and cobbled	Paved	Good	

DIPHTHERIA AND MEMBRANOUS CROUP.

The number of cases notified during the year was 55, compared with 107 during 1911, 96 during 1910, and 102 during 1909.

This is the smallest number of cases of Diphtheria annually notified since the year 1897, a period of fourteen years, and is a very satisfactory record.

There were 9 deaths out of the 55 cases, or a case mortality of 16.3 per cent., compared with a case mortality of 26.1 per cent. during 1911.

The death-rate from Diphtheria during 1912 was 0.06 per 1,000 compared with a death-rate of 0.21 per 1,000 during 1911.

The highest incidence and mortality occurred between the ages of one and ten years.

The following are the cases and deaths in age-periods:—

Age Periods in Years.	Notified Cases.		Deaths.	
0—1.	0		0	
1—2	2	17	0	8
2—3	5		2	
3—4	3		4	
4—5	7		2	
5—6	10	20	1	1
6—7	3		0	
7—8	4		0	
8—9	2		0	
9—10	1		0	
10—15	8	8	0	
15—20	2	2	0	
20—25	5	5	0	
25—35	1	1	0	
35—45	1	1	0	
45—55	1	1	0	
55 & up.	0	0	0	
	<hr/> 55		<hr/> 9	

The following are the cases of Diphtheria arranged in months for the years 1911 and 1912 :—

	Jan.	Feb.	Mar.	April.	May.	June.
1912 :	11	2	6	4	7	3
1911 :	4	10	11	10	15	5

	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1912 :	8	2	2	4	4	2
1911 :	13	12	4	6	6	11

Total for 1912 : 55. Total for 1911 : 107.

The following are the cases of Diphtheria, arranged in the four quarters of the year, since 1901 :—

Year.	1st Quarter	2nd Quarter	3rd Quarter.	4th Quarter
1901	117	70	55	42
1902	19	17	20	27
1903	56	29	30	17
1904	22	12	7	19
1905	27	29	36	65
1906	51	28	46	41
1907	69	26	24	31
1908	23	23	18	36
1909	36	29	14	23
1910	16	18	24	38
1911	25	30	29	23
1912	19	14	12	10

These 55 cases occurred at 47 houses. One case occurred at the Fever Hospital, and one at the Cottage Homes, Queen's Park Road.

The drains were tested at all these houses. Defects were found at 26 houses, and steps were taken immediately to remedy the same.

Any other insanitary conditions found were also remedied.

The sanitary conditions at the infected houses were as follows :—

At 32 houses there were fresh-water closets.

„ 2 „ slop-water closets.

„ 13 „ pail closets.

Of the Back-yards at these houses :

29 were flagged.

7 „ flagged and cobbled.

5 „ asphalted.

2 „ cobbled.

2 „ flagged and gardened.

1 was asphalted and gardened.

1 had no back-yard.

Of the Back-roads and Passages :

28 were paved.

5 „ flagged.

3 „ cobbled.

9 „ unpaved.

2 houses had no back-road or passage.

At 13 houses the Back-yards were out of repair, and notices were served on the owners to repair the same.

The following Analysis of the notified cases of Diphtheria in association with a bacteriological examination of throat-swabs is interesting :—

The notified cases from which swabs had been taken and which, on examination, proved to contain Diphtheria Bacilli, were 11.

The notified cases from which swabs had been taken and which, on examination, proved not to contain Diphtheria Bacilli, were 7.

The notified cases from which no swab had been taken were 36.

In 4 cases a swab was taken before the house was disinfected.

In 14 cases no swab was taken before disinfection.

30 cases were removed to the Fever Hospital.

6 patients died at their own homes.

During the year 1912, 104 swabs were taken altogether apart from those taken at the Fever Hospital. One case occurred in the Hospital which has not been counted in the above figures.

Out of the 55 cases of Diphtheria notified during 1912, anti-toxin was injected in 30 cases.

This is a most valuable remedy, especially when used during the first three days of the illness. Anti-toxin is supplied free by the Corporation to medical practitioners, as it is a useful public health preventive measure.

The amount distributed during the year represented 122 bulbs of 4,000 units each, as follows :—

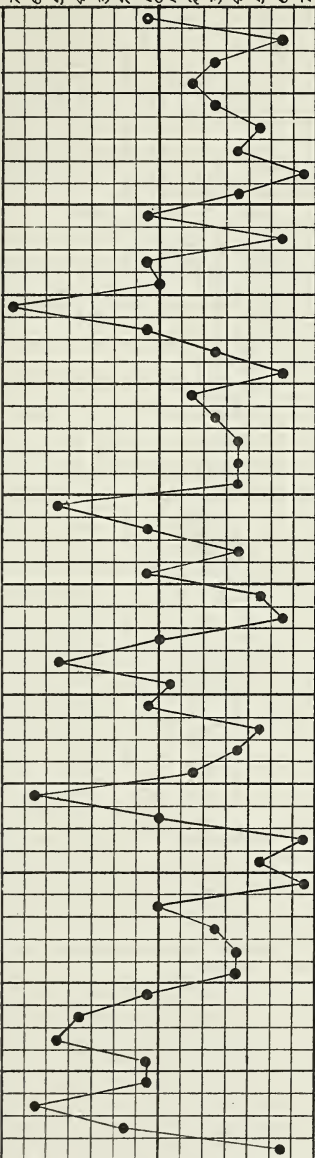
Fever Hospital	80
Medical Men (Police Stations)	6
Medical Men (Health Officer)	36

TABLE XXXIV.

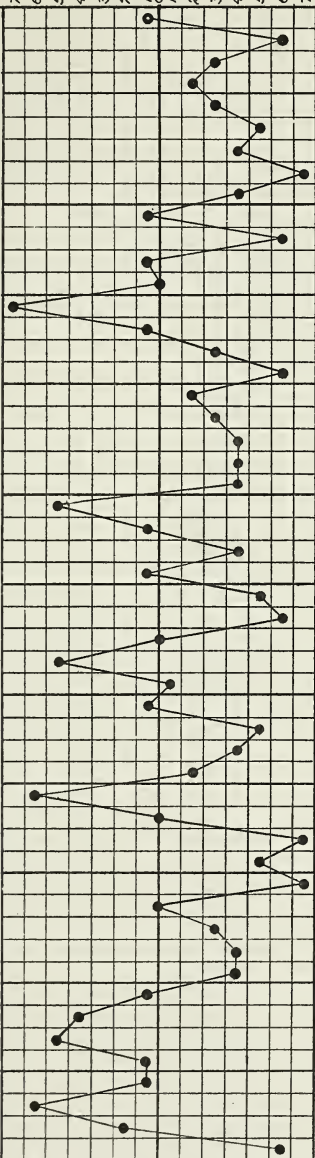
Cases of Diphtheria Notified in Wards.

WARDS.	1904	1905	1906	1907	1908	1909	1910	1911	1912
St. Stephen's..	3	9	10	7	7	8	6	6	2
Trinity	6	16	20	13	2	3	3	3	3
St. Michael's..	1	20	19	14	4	10	4	...	3
St. John's	5	16	11	23	14	8	5	6	6
St. Silas'	14	11	9	20	24	13	3	21	3
St. Paul's	3	11	15	6	12	8	14	7	8
St. Peter's.....	4	6	1	3	4	4	3	3	...
St. Mary's.....	5	18	14	12	1	3	3	4	4
St. Matthew's..	4	13	12	10	5	9	5	4	3
St. Thomas' ...	...	8	6	12	3	3	4	8	3
Park	5	8	10	10	8	6	7	13	2
St. Luke's	7	5	6	5	3	5	4	4	2
St. Mark's.....	3	5	6	5	7	4	22	19	7
St. Andrew's...	...	11	27	10	6	18	13	9	9
Totals...	60	157	166	150	100	102	96	107	55

NOTIFIED CASES
OF
DIPHTHERIA.



DIRECTION OF WIND	
E.	W.
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
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81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100



RAINFALL IN EACH MONTH.

CASES OF DIPHTHERIA IN EACH MONTH.

DIPHTHERIA.

TABLE XXXV.

Year.	Cases Notified.	Deaths.	Mortality per 1,000 Population.
1883	.....	2	0'01
1884	.....	1	0'009
1885	.....	1	0'009
1886	.....	...	0'00
1887	.....	1	0'008
1888	.....	1	0'008
1889	4	4	0'03
1890	5	4	0'03
1891	1	..	0'00
1892	3	1	0'008
1893	3	2	0'01
1894	40	14	0'11
1895	31	7	0'05
1896	25	10	0'08
1897	15	5	0'04
1898	77	32	0'25
1899	229	74	0'58
1900	334	91	0'11
1901	284	62	0'47
1902	83	23	0'17
1903	132	26	0'19
1904	60	11	0'08
1905	157	33	0'25
1906	166	26	0'19
1907	150	17	0'12
1908	100	12	0'09
1909	102	18	0'13
1910	96	22	0'16
1911	107	28	0'21
1912	55	9	0'06

DIARRHŒA AND EPIDEMIC ENTERITIS.

The number of deaths from Diarrhœa and Epidemic Enteritis during 1912 was 40, compared with 208 during 1912.

When the reading of the 4ft. thermometer exceeds 56deg. Fahrenheit, a condition arises which is probably associated with an increase in the number of Diarrhœa deaths.

The condition is also rendered still more favourable for the spread of disease when flies and dust abound, and when food putrefies rapidly.

There is no doubt that very great dangers accompany the wanderings of flies. It is, therefore, extremely important that all material which affords breeding facilities for the flies, should be removed as speedily as possible. Such material includes collections of horse manure and organic refuse generally, especially when such collections are allowed to remain near dwelling-houses.

Every effort should be made towards the diminution of these dangers.

I have again made inquiries at houses where deaths from Diarrhœa occurred, according to age, number of days ill before death, occupation of mother, feeding of child, means of storing milk and food, sanitary accommodation, condition of yard and back-passage, and structures in the yard.

The following pages contain a summary of the results of these visits.

As to the number of days the children were ill before death

occurred, it was found that, of 31 children who died from Diarrhœa, under one year of age—

4	were ill	1	day	before death.
1	was ill	2	days	before death.
3	were ill	3	„	„
2	„	4	„	„
1	was ill	5	„	„
4	were ill	6	„	„
2	„	7	„	„
1	was ill	8	„	„
1	„	9	„	„
2	were ill	10	„	„
3	„	2	weeks	before death.
2	„	3	„	„
2	„	4	„	„
1	was ill	2	months	before death
1	„	3	„	„
1	„	4	„	„

As to the occupation of the Mothers, the following was found :—

18	House duties.
4	Weavers.
4	Cardroom-hands.
2	Ring-spinners.
1	Yarn-picker.
1	Confectioner.
1	Charwoman.

As to the method of feeding, it was found that—

12	were fed with a hygienic bottle.
2	were fed partially on the breast and partially with hygienic bottle.
1	was fed partially on the breast and partially with hygienic and tube bottles combined.

1 was fed partially on the breast and partially with the tube-bottle.

1 was fed partially on the breast and partially with tube-bottle and spoon.

2 were fed with hygienic bottle and tube-bottle.

2 were fed with tube-bottle.

1 was fed with tube-bottle and cup.

4 were fed with spoon.

5 were fed on the breast.

7 of these children were nursed out.

The sanitary conveniences were as follows :—

At 18 houses there were fresh-water closets.

„ 2 „ „ slop-water closets.

„ 11 „ „ pail-closets.

Of the Back-yards at these houses—

12 were flagged.

11 „ flagged and cobbled.

3 „ partly flagged.

4 „ cobbled.

1 was paved.

Of the Back-roads and Passages—

20 were paved.

2 „ unpaved.

8 „ flagged.

1 was flagged and cobbled.

The condition of the houses was as follows :—

20 were clean.

9 „ fairly clean.

2 „ dirty.

TABLE XXXVI.

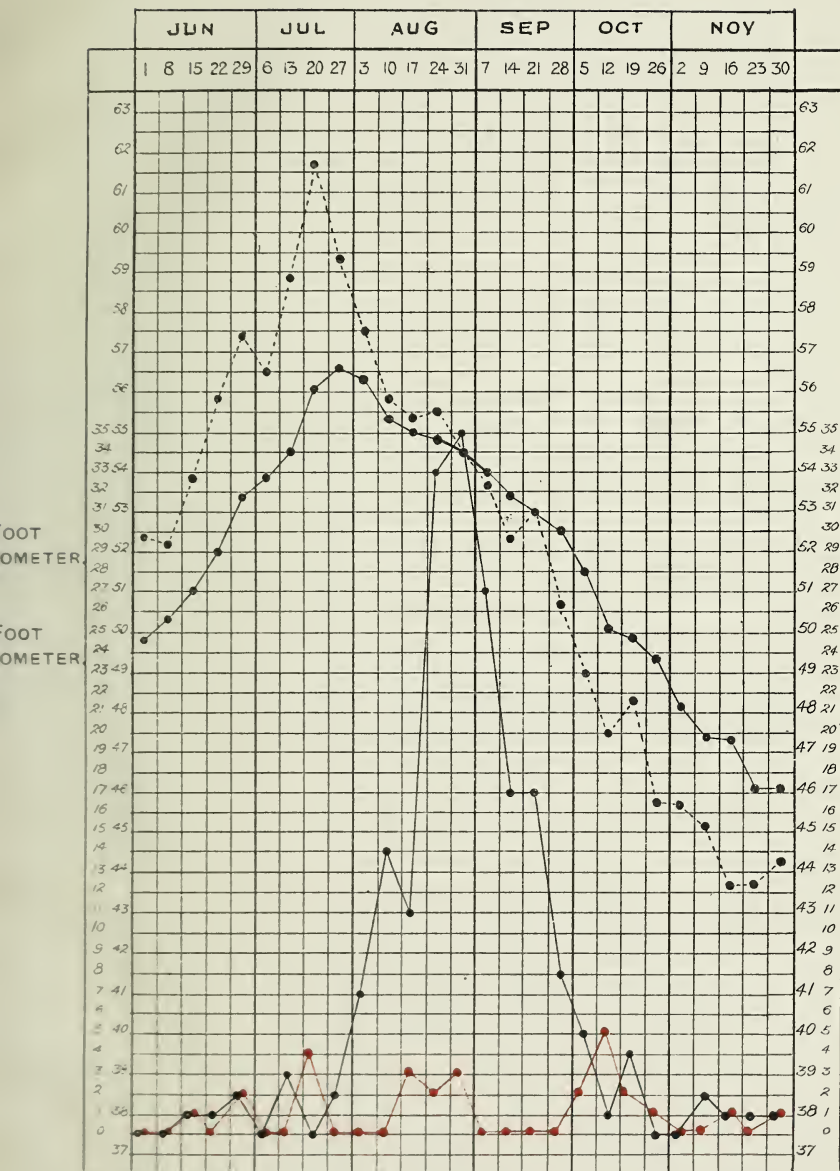
No.	Age.	Days ill before death.	Work of mother.	If returned to work since birth of child.	Feeding of child at death.	Breast fed how long from birth.	Means of storage of milk and food.	Sanitary accommodation.	Condition of yard.	Condition of back passage.	Structures in yard.
1	3 months	56 days	...	...	Breast	3 months	...	Pail	Flagged and cobbled	Flagged	...
2	2 months	6 days	Weaver	12 weeks	Hygienic bottle	...	Pantry	W.C.	Flagged	Unpaved	Coal shed
3	3 months	1 day	...	...	Breast	5 months	Kitchen	Slop-water	Paved	Paved	...
4	8 months	14 days	...	...	Hygienic bottle and tube	...	Cupboard	Pail	Flagged and cobbled	Paved	...
5	9 months	2 days	Ring spinner	12 weeks	Breast and hygienic bottle	2½ months	Table in front room	Pail	Flagged	Flagged	...
6	3 months	4 days	Confectioner	4 weeks	Hygienic bottle	...	In shop (covered)	W.C.	Flagged	Paved	...
7	11 months	3 days	Ring spinner	4 weeks	Breast, spoon and tube	4 months	Scullery cupboard	W.C.	Flagged	Flagged	Rabbit Hutch
8	8 months	14 days	...	...	Breast and hygienic bottle	6 months	Shelf in scullery	W.C.	Flagged and cobbled	Paved	...
9	5 months	3 days	...	...	Breast and tube	1 month	Kitchen	W.C.	Flagged and cobbled	Paved	...
10	5 months	5 days	...	...	Tube bottle	...	Kitchen	W.C.	Flagged and cobbled	Paved	...

TABLE XXXVI.—continued.

No.	Age.	Days ill before death.	Work of mother.	If returned to work since birth of child.	Feeding of child at death.	Breast fed how long from birth.	Means of storage of milk and food.	Sanitary accommodation.	Condition of yard.	Condition of back passage.	Structures in yard.
11	5 months	10 days	Weaver	16 weeks	Breast Hygienic bottle and tube bottle	2 weeks	Kitchen	Pail	Flagged and cobbled	Paved	..
12	4 months	6 days	..	..	Breast	4 months	Shelf in scullery	Pail	Flagged	Paved	...
13	27 days	27 days	..	..	Hygienic bottle	...	Scullery	W.C.	Flagged	Paved	...
14	9 months	21 days	..	..	Tube bottle	4 months	Shelf in Scullery	Pail	Cobbled	Paved	...
15	11 months	9 days	..	..	Tube bottle and cup	...	Kitchen (covered)	W.C.	Flagged	Flagged	...
16	4 months	4 months	..	..	Hygienic bottle	6 weeks	...	Pail	Cobbled	Paved	...
17	3 months	3 months	..	..	Spoon	3 months	Kitchen	W.C.	Flagged and cobbled	Flagged	...
18	8 months	28 days	reeler	..	Spoon	6 months	Back kitchen	W.C.	Flagged and cobbled	Paved	...
19	1 month	6 days	..	..	Hygienic bottle	...	Scullery	W.C.	Flagged	Flagged	...
20	3 months	1 day	Cardroom	..	Hygienic bottle	5 weeks	Kitchen (covered)	Stop-water	Flagged	Flagged	Rabbit Hutch
21	5 months	10 days	..	..	Hygienic bottle	...	Cupboard	W.C.	Part flagged	Flagged	...

CHART 4.

Diarrhœa.



RED LINE - DEATHS 1912

BLACK LINE - DEATHS 1911.

TABLE XXXVI.—continued.

No	Age.	Days ill before death.	Work of mother.	If returned to work since birth of child.	Feeding of child at death.	Breast fed how long from birth.	Means of storage of milk and food.	Sanitary accommodation.	Condition of yard.	Condition of back passage.	Structures in yard.
22	3 months	7 days	Weaver	5 weeks	Spoon	2½ months	Kitchen (covered)	Pail	Part flagged	Paved	...
23	7 months	6 days	...	...	Hygienic bottle and tube bottle	1½ days	Shelf kitchen (covered)	W.C.	Flagged and cobbled	Flagged and cobbled	...
24	10 months	21 days	...	...	Hygienic bottle	4 months	Shelf in scullery	W.C.	Flagged	Paved	...
25	9 months	8 days	Cardroom	9 months	Cup and spoon	9 months	Scullery	W.C.	Part flagged	Paved	...
26	1 month	1 day	Weaver	...	Hygienic bottle	...	Kitchen	Pail	Cobbled	Paved	...
27	4 months	1 day	Yarn Picker	...	Hygienic bottle	...	Scullery	W.C.	Flagged	Unpaved	...
28	25 days	7 days	...	...	Breast	25 days	Scullery	Pail	Flagged and Cobbled	Paved	...
29	2 months	3 days	Cardroom	...	Hygienic bottle	...	Kitchen	Pail	Flagged and cobbled	Paved	...
30	2 months	14 days	...	...	Breast	2 months	...	W.C.	Cobbled	Paved	...
31	9 months	4 days	Charwoman	1 month	Hygienic bottle	...	Kitchen	W.C.	Flagged	Paved	...

SMALLPOX AND VACCINATION.

I am happy to state that no case of Smallpox occurred in Blackburn during 1912.

It is, however, my duty to state that this favourable state of affairs may be disturbed seriously at any time, because, as I have said before, the proportion of the population of Blackburn which will be susceptible to the infection from Smallpox when another outbreak of that disease should occur, is increasing.

Reference to Table XXXVIII. will show that the number of exemptions from vaccination show an increase of 252 over last year, which was the highest number recorded previously.

SMALLPOX.

TABLE XXXVII.

Year.	Cases Notified.	Deaths.	Mortality per 1,000 Population.
1883	4	0	·00
1884	0	0	·00
1885	4	0	·00
1886	28	2	·01
1887	42	4	·03
1888	98	10	·08
1889	0	0	·00
1890	0	0	·00
1891	0	0	·00
1892	4	2	·01
1893	79	8	·06
1894	13	0	·00
1895	0	0	·00
1896	0	0	·00
1897	0	0	·00
1898	0	0	·00
1899	0	0	·00
1900	13	2	·01
1901	0	0	·00
1902	49	2	·01
1903	92	3	·02
1904	2	0	·00
1905	4	0	·00
1906	0	0	·00
1907	1	0	·00
1908	0	0	·00
1909	2	0	·00
1910	1	1	·007
1911	0	0	·00
1912	0	0	·00

VACCINATION.—For 1894—1912.

TABLE XXXVIII.

Year	Births.	S'ccessfully Vaccinated	Died Un- vaccinated	Insus- ceptible	Postponed	Exempted	Removed out of Distri't and traced.	Removed and not traced.
1894	3621	2589	340	21	96	...	..	505
1895	3899	2612	543	20	115	...	...	609
1896	3552	2587	495	59	113	...	...	288
1897	3629	2301	451	17	137	...	...	723
1898	3662	2459	655	3	153	164	...	228
1899	3643	2616	519	9	191	139	51	118
1900	3438	2687	416	8	52	120	56	47
1901	3386	2640	408	18	76	158	19	40
1902	3357	2635	329	13	68	128	20	56
1903	3304	2330	304	20	53	117	24	28
1904	3100	2181	353	12	63	120	13	50
1905	3193	2274	290	17	39	190	7	29
1906	3418	2264	337	9	61	305	7	60
1907	3348	1828	311	4	57	407	9	70
1908	3415	1442	349	4	47	887	14	77
1909	3139	1200	244	7	44	980	3	7
1910	2948	996	234	3	32	1159	23	109
1911	2857	718	290	12	52	1233	26	463
1912	2741	689	213	10	25	1485	17	302

TABLE XXXIX.

VACCINATION RETURNS FOR THE YEAR 1912.

MONTH.	Births.	Vaccinations.	Exemptions.	Removals not traced.	Removed and traced out of district.	Insusceptible.	Postponements.	Unaccounted for not Vaccinated.	Died Unvaccinated	Successfully Vaccinated each Quarter.
January ..	265	85	136	9	5	1	4	4	21	} 244
February	219	82	110	4	2	...	4	4	13	
March	242	77	126	5	3	...	4	13	14	
April	236	85	111	8	1	...	3	7	21	} 221
May.....	237	69	133	3	4	...	2	11	15	
June	211	67	124	1	1	1	1	2	14	
July	252	67	155	1	1	3	...	6	19	} 169
August ...	223	49	123	1	...	2	5	18	25	
September	238	53	138	...	...	2	1	29	15
October ...	232	29	141	1	42	19	} 55
November	189	15	99	...	...	...	...	57	18
December	197	11	89	...	...	1	...	77	19
Totals ...	2741	689	1485	32	17	10	25	270	213	689

PUERPERAL FEVER.

There were 9 notifications of Puerperal Fever received from Medical Practitioners, including 3 deaths during 1912, compared with 9 such notifications, including 5 deaths during 1911.

14 bulbs of Puerperal Serum were supplied free to medical men during the year.

MIDWIVES.

Two hundred and five visits have been paid to Midwives practising within the Borough of Blackburn during the year, and the work shows a marked improvement on previous years.

Greater attention is being paid to the taking and recording of the pulse and temperature of the patients, especially by "bona-fide" midwives; and as this may be termed the "criterion" of the condition of the patients, the need for such care is very essential.

The Midwives continue to weigh babies at birth and on the 10th day, and it is pleasing to record that the prejudice against weighing, previously so apparent, is gradually decreasing.

Two cases of ophthalmia have occurred in the practice of the midwives during 1912.

Four letters have been sent to midwives for failing to comply with the rules of the Central Midwives' Board.

Two visits were paid to uncertified monthly nurses, who had been in contact with an infectious disease. These nurses were instructed to carry out the disinfection of person, clothing, and bag, according to the prescribed regulations.

There have been fewer known cases this year of "handy-women" acting as midwives. Two women were prosecuted suc-

cessfully under Section 1 (2) of the Midwives' Act, 1902, for acting illegally as midwives, and in addition to these two cases, 13 letters have been sent out to women, warning them against the continuance of this practice, and several have been warned verbally.

Sixty-two Midwives were on the register at the beginning of the year.

Of this number, 42 are subject to inspection, 8 act as "monthly nurses," 3 are in institutions, 3 did not notify their intention to practice, 2 do not practice, 2 have resigned, and 1 has died.

The name of one midwife was removed from the roll owing to neglect of duties.

All midwives wear washable dresses, and carry bags with the regulation appliances.

Eight are illiterate, the case-books being kept by a daughter or some other person.

One midwife is incapable of taking either pulse or temperature, and consequently does not use a temperature-chart book.

CONDITION OF BAGS.

Satisfactory	28
Fairly Satisfactory	14
Unsatisfactory	0
	—
	42

CASE-BOOKS.

Satisfactory	23
Fairly Satisfactory	18
Unsatisfactory	1
	—
	42

TEMPERATURE CHART-BOOKS.

Satisfactory	24
Fairly Satisfactory	12
Unsatisfactory	5
	—
	41

CLEANLINESS OF PERSON.

Clean	33
Fairly Clean	9
	—
	42

CLEANLINESS OF HOUSES.

Clean	34
Fairly Clean	8
	—
	42

Number of houses with Bathrooms: 12.

REASONS FOR SENDING FOR MEDICAL HELP.

PREGNANCY :

Threatened Eclampsia	1
Abnormal conditions	3

LABOUR :

Presentations—

Undiagnosed	6
Breech	10
Transverse	2
Right Occipito-Anterior	1
Right Occipito-Posterior	1

Prolapsed Cord	5
Face	2
Footling	2
Hand	1
Premature Labour	1
Albuminuria	1
Collapse	1
Delayed Labour	31
Primary Uterine Inertia	5
Secondary Uterine Inertia	6
Obstructed Labour	21
Retained Placenta	2
Partial Adhesion of Placenta	1
Adherent Placenta	7
Miscarriage	13
Placenta Prævia	1
Deformed Pelvis	6
Ruptured Perineum	41
Rigid Perineum	10
Threatened Rupture of Perineum	2
Patient's request	5
Post-Partum Hæmorrhage	7
Ante-Partum Hæmorrhage	8
Twin Labour	1
Mental Aberration during Labour	1
Threatened Miscarriage	1
Violent and Persistent Vomiting during Labour ...	1
Other causes	7

PUERPERIUM :

High Temperature	4
Mastitis	1
Rigor and Collapse	1
Œdema of Extremities	1
Eclampsia	1
Other cause	1

CHILD :

Inanition	15
Jaundice	1
Ophthalmia	1
Inflammation of Eyes	3
Prematurity	6
Pemphigus Neonatorum	1
Spina Befida	2
Asphyxia	1
Convulsions	3
Developmental Defects	4
Death and Still-Birth	3
Imperforate Urethral Orifice	7
Other causes	5

Total 275

Still-births notified by Midwives	50
Puerperal Fever cases attended by Midwives	5

TABLE XL.—MIDWIVES REGISTERED DURING 1912.

No.	Name.	Address.	Date of Enrolment.	Qualification.
9050	Arner, Emma	98 Accrington Road	1904—Oct. 27	L.O.S., 1900
5626	Backhouse, Ruth	11 Queen's Road	" June 30	In Practice July, 1901
5627	Baylie, Margaret	31 Shorrock Lane	" June 30	Ditto
5788	Beard, Mary	2 Bright Street	" June 30	Ditto
34429	Caldwell, Mary Ellen	49 Holly Street	1911—Oct. 28	C.M.B.
34447	Coggins, Mary Emma	2 Paradise Terrace	" Oct. 28	C.M.B.
6235	Collins, Rose Ann	26 Lord Derby Street	1904—July 21	In Practice July, 1901
5628	Conway, Mary Ann	35 Eccles Street	" June 30	Ditto
10257	Corrigan, Mary Ann	11 Henrietta Street	" Nov. 24	Ditto
31423	Coupe, Elizabeth E.	38 Carr Street	1910—Sept. 1	Ditto
26684	Counsell, Elizabeth Ellen	59 Riley Street	1908—July 22	St. Mary's Hospital, C.M.B.
18468	Doran, Annie	43 Daisy Street	1905—April 27	In Practice July, 1901
26708	Duckett, Teresa Agnes	20 Ramsey Road	1908—June 23	C.M.B.
10981	Dunwoody, Elizabeth	Union Infirmary	1904—Dec. 22	In Practice July, 1901

TABLE XL.--continued.

No.	Name.	Address.	Date of Enrolment.	Qualification.
6954	Foxcroft, Alice	85 Bold Street.....	1904—Sept. 29	In Practice July, 1901
5829	Fairbrother, Elizabeth	40 Pickup Street.. ..	„ June 30	Ditto
6523	Gabbutt, Mary	187 Downham Street	„ July 21	Ditto
6524	Galloway, Selina Ann	72 Duke's Brow.....	„ July 21	Ditto
5826	Gee, Margaret	79 Pendle Street	„ June 30	Ditto
13099	Gibson, Martha Kathleen	District Nurses Home.....	1905—Feby. 23	C.M.B.
3690	Gleeson, Annie	5 Park Road.....	1904—April 28	L.O.S., July 10, 1900
11058	Gordon, Ellen	10 Taylor Street	1905—Dec. 22	In Practice July, 1901
27389	Greenwood, Bridget	25 Emily Street	1908—Dec. 2	St. Mary's Hospital, C.M.F.
10293	Hacking, Annie	6 Brothers Street	1904—Nov. 24	In practice July, 1901.
6604	Haworth, Mary.....	98 Haslingden Road	„ July 21	Ditto
22142	Haworth, Margaret	106 Lower Audley Street.....	1905—April 27	C.M.B.
5824	Hoghton, Martha Jane	9 Bicknell Street	1904—June 30	In practice July, 1901.
7760	Houghton, Mary	42 Anvil Street	„ Sept. 29	Ditto
6526	Hummer, Elizabeth	89 Balaclava Street ..	„ July 21	Ditto

TABLE XL.—continued.

No.	Name.	Address.	Date of Enrollment.	Qualification.
7360	Johnson, Edith Mary	24 Bicknell Street.....	1904—Sept. 20	Glasgow Maternity Hospital, Aug. 1, 1904
5630	Leigh, Elizabeth	91 London Road	" June 30	In Practice July, 1901
31681	Leyland, Emily Mand	15 Audley Street	1910—June 25	C.M.B.
3810	Lightbown, Margaret	94 Livesey Branch Road ..	" April 28	St. Mary's Hospital, Manchester, Mar. 1899
38268	Lancaster, Ruth C. P.	62 Revidge Road	1910—Feb. 21	C.M.B., 1910.
16161	McCall, Elizabeth Alice.....	122 London Road	1905—Mar. 23	In Practice, July, 1901.
31752	Mitchell, Edith	609 Bolton Road	1910—June 25	C.M.B.
6327	Moore, Alice	82 Derby Street.....	1905—July 21	In Practice July, 1901.
5650	Newton, Mary	80 Whalley New Road	" June 30	L.O.S., February 26, 1904
6009	Nixon, Mary Alice	37 Goldhey Street	" July 21	In Practice July, 1901.
31772	Oates, Margaret Ann.....	311 Bolton Road ..	1910—June 25	St. Mary's Hospital, Manchester, C.M.B., 1910
8593	Ormerod, Nancy	40 Hickory Street.....	1905—Oct. 27	In Practice July, 1901
30171	Parkington, Elizabeth	116 New Bank Road	1910—Feb. 21	C.M.B.
31952	Parrish, Eliza	152 Moss Street.....	" Sept. 1	In Practice, July, 1901

TABLE XL.—continued.

No.	Name.	Address.	Date of Enrollment.	Qualification.
7209	Peacock, Sarah Elizabeth	169 Whalley Old Road	1905—Sept. 29	In Practice July, 1901
6072	Pearson, Caroline.....	111 Bonsall Street	1904—June 30	Ditto
1300	Polsue, Sophie.....	5 St. Andrew Street.....	1904—Jan. 28	C.M.B.
5938	Porter, Betsy Jane	16 Lord Byron Street	1904—June 30	In Practice July, 1901
5935	Rimmer, Ellen	76 Artillery Street ..	„ June 30	Ditto
27163	Sullivan, Emily ..	Union Workhouse.....	1908—Nov. 2	C.M.B.
27628	Thompson, Ellen	37 Alma Street ..	„ Nov. 2	C.M.B.
6076	Whalley, Jane Ellen.....	2 Elgee Street ..	1904 June 30	In Practice July, 1901
6239	Wilson, Annie	40 Inkerman Street ..	„ July 21	Ditto
22892	Wood, Emma Lucy	178 Kedlam, Witton	1905—Nov. 25	C.M.B.
5631	Wrigley, Mary	33 Stansfeld Street ..	1904—June 30	In Practice July, 1901
5639	Yates, Mary Alice	102 Newton Street	„ June 30	Ditto
30930	Yates, Sarah Louisa	33 Sarah Ellen Street	1910—June 25	C.M.B., 1910

TABLE XLI.—DEATHS IN CHILDREN DURING THE LAST TEN YEARS.

	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
Puerperal Fever	5	3	10	5	12	2	7	8	5	3
Placenta Prævia—Flooding	2	4	3	4	1	4	3	4	3	1
Parturition .....	...	...	...	...	...	...	...	...	...	...
Puerperal Convulsions	4	...	2	3	...	5	3	5	3	3
Abortion—Miscarriage	2	2	2	1	2	1	2	2	1	2
Other Accidents of Child Birth	12	6	11	2	11	4	5	2	7	3
Puerperal Mania .....	...	1	...	...	2	...	...	...	...	...
Puerperal Thrombosis .....	...	...	2	3	1	...	...	...	2	...
	20	13	20	13	17	16	20	21	21	12
Number of Puerperal Cases Notified	11	7	24	12	25	11	11	10	9	9

ERYSIPELAS.

During 1912, 87 cases of Erysipelas were notified and 2 deaths registered, giving a case mortality of 2.3 per cent.

During 1911, 77 cases were notified and 2 deaths registered.

WHOOPIING COUGH.

There were 27 deaths from Whooping Cough, compared with 50 deaths during 1911, and 15 deaths during 1910.

They occurred in the age-periods as follows :—

0—1	1—2	2—5	5—10
14	8	5	0

INFLUENZA, BRONCHITIS, AND PNEUMONIA.

The number of deaths from Bronchitis and Pneumonia was 396, compared with 409 in 1911, 349 in 1910, and 489 in 1909; and the deaths from Influenza were 20 compared with 14 in 1911, 28 in 1910, and 46 in 1909.

The deaths from Bronchitis and Pneumonia, in months, occurred as follows :—

Jan.	Feb.	Mar.	April.	May.	June.
20	59	41	44	42	20
July.	Aug.	Sept.	Oct.	Nov.	Dec.
20	17	11	30	24	68

ALCOHOLISM.

During 1912, 4 deaths were certified as having been directly caused by Alcoholism and Delirium Tremens, compared with 7 during 1911. These four deaths occurred in Males.

During 1912, 8 deaths were caused by Cirrhosis of the Liver, which is a disease frequently associated with Alcoholism, compared with 7 during 1911.

The following is an Analysis of the deaths from Alcoholism and Cirrhosis of the Liver, according to sex and age-period :—

Age.	Males.	Females.	Total.
25—35	2	0	2
35—45	0	2	2
45—55	2	0	2
55—60	2	0	2
60—65	1	1	2
65—75	2	0	2
	<hr/>	<hr/>	<hr/>
	9	3	12

CANCER.

There were 128 deaths from Cancer during the year, compared with 113 during 1911, and 127 during 1910.

An analysis of the deaths as to the kind of Cancer shows the number of the varieties of this disease thus :—

Carcinoma	99
Malignant Disease	12
Epithelioma	10
Rodent Ulcer	3
Sarcoma	3
Scirrhus	1

On examining the death returns for 1912, it was found that Cancer affected the following parts of the body :—

Uterus	23
Intestines	16
Stomach	16
Liver	14
Head	12
Breast	10
Rectum	7

Œsophagus	5
Glands	4
Leg	4
Bladder	3
Prostate	2
Scrotum	2
Kidney	1
Pancreas	1
Penis	1
Larynx	1
Not stated	6

CANCER DEATHS.

The investigation of Cancer deaths has been continued during 1912 by Dr. Buchanan, and the following is his account of the work carried out in this respect :—

One hundred and forty-two visits were paid to 121 houses, and 100 cases were investigated.

In twenty-one cases, owing to removals, etc., no particulars were obtained.

Of the hundred cases investigated, 43 were males and 57 were females.

AGES : MALES.

2 were between 35 and 40 years of age.

6	„	40	„	50	„
16	„	50	„	60	„
10	„	60	„	70	„
9	„	70	„	80	„

AGES : FEMALES.

1	was	23	years	of	age.
5	were	between	30	and	40 years of age.
9	„	40	„	50	„
11	„	50	„	60	„
23	„	60	„	70	„
6	„	70	„	80	„
2	„	80	„	90	„

The average age in the case of Males was 58.3 years, and in the case of Females 58.6.

The corresponding figures for the cases investigated during 1910 and 1911 were—

For Males, 57.7 and 59.03 ;

For Females, 55.2 and 58.8, respectively.

LOCATION OF DISEASE.

Stomach	15
Stomach and Liver	2
Stomach and Cœcum	1
Uterus	17
Breast	8
Breast and Omentum	1
Rectum	6
Liver	8
Male Genito—Urinary System	8
Face	5
Throat	3
Palate	1
Lower Lip, Jaw, and Throat	1
Œsophagus	3
Intestines	9
Thigh	2

Pancreas	I
Cerebellum	I
Ovary, Peritoneum, and Liver	I
Mediastinal Glands	1
Inguinal Glands	1
Axillary Glands	I
Lungs (secondary to Leg)	I
Gall Bladder	I
Peritoneum	I
Leg	I

DURATION OF DISEASE.

11 lasted 1 to 6 months.

17 „ 6 „ 12 „

30 „ 1 „ 2 years.

17 „ 2 „ 3 „

10 „ 3 „ 4 „

4 „ 4 „ 5 „

5 „ 5 „ 6 „

2 „ 6 „ 7 „

4 were of uncertain duration.

FAMILY HISTORY.

A positive history was ascertained in 18 out of the 100 cases, as follows:—

Female, 53 years. Cancer of Uterus. Mother died of Cancer of Breast.

Female, 55 years. Cancer of Uterus. Father died 34 years previously of Cancer of Stomach.

Female, 46 years. Cancer of Uterus. Mother died of Cancer of Uterus also, 37 years before her daughter.

Male, 52 years. Cancer of Throat. Mother died 7 years ago of Cancer of Face.

Female, 74 years. Cancer of Cœcum. Daughter died 22 years previously of Cancer of Liver.

Female, 56 years. Cancer of Uterus. Mother also died of Cancer of Uterus 40 years ago.

Female, 61 years. Cancer of Cœcum and Stomach. Sister died of Cancer several years ago.

Male, 70 years. Cancer of Urinary Bladder. Sister died 4 years ago of Cancer of Bowel.

Female, 74 years. Cancer of Rectum. Sister was "said to have died of Cancer."

Female, 72 years. Cancer of Breast. Sister died 10 years ago of Cancer of Uterus.

Female, 64 years. Cancer of Uterus. Brother died 3 years ago of "Cancer."

Male, 73 years. Cancer of Urinary Bladder. Daughter died 8 years previously of Cancer of Breast.

Male, 50 years. Cancer of Œsophagus. Mother died of "Internal" Cancer 21 years ago, and her brother died of Cancer of Throat 6 years later.

Male, 41 years. Cancer of Stomach. "One or two" of his family were said to have died of Cancer.

Male, 41 years. Cancer of Stomach. Uncle died of "Cancer" 5 years ago.

In two cases there was a history of cousins having died of Cancer.

There was one case of husband and wife both dying of Cancer of Stomach, the husband five years after his wife.

Three members of one family, a brother and two sisters, died of Cancer during the year, in three separate houses.

In several cases, owing to lack of knowledge on the part of my informants, it was not possible to discover whether there had been previous cases of Cancer in the families under investigation.

CASES ASSOCIATED WITH INJURY.

There were 22 cases in which the Cancer was attributed to previous injury :—

Female, 68 years. Cancer of Stomach. Six years ago swallowed “hartshorn and oil”; never well since.

Female, 34 years. Cancer of Uterus. Parturition 22 months previously.

Male, 62 years. Cancer of Cheek. Received a blow from a man’s elbow many years ago.

Female, 67 years. Sarcoma of thigh-bone. Fell and twisted same leg 2 years ago.

Female, 86 years. Cancer of Face. Attributed to a mosquito-bite received 22 years ago. The first symptoms of the disease was noticed two years later.

Female, 68 years. Cancer of Bowel. Had a Double Hernia 4 years ago.

Male, 52 years. Cancer of Stomach. Received a blow on the stomach 8 months before death. This man had suffered for many years from Indigestion, and had partaken freely of bicarbonate of soda and ginger.

Female, 41 years. Cancer of Womb. Attributed by friends to the fact that she had a baby 18 months previously.

Female, 65 years. Cancer of Breast. Had an "accidental knock" on the same breast a few years ago.

Male, 58 years. Cancer of Stomach. Was hit by plank in abdomen the previous year.

Male, 53 years. Cancer of Gall-Bladder. Had suffered from Gall-stones for many years.

Male, 52 years. Cancer of Throat, which began in the lower jaw. Deceased had "complained of a broken tooth."

Female, 49 years. Cancer of Colon. Had "twist of bowels" 20 years previously.

Male, 57 years. Cancer of Peritoneum. Fell downstairs 4 years ago and hurt his abdomen.

Female, 35 years. Cancer of Breast. Blamed on a purse which she wore in her dress, and which pressed against the breast.

Female, 41 years. Cancer of Intestines. Attributed to constantly leaning over flour-bins.

Male, 64 years. Cancer of Stomach. Was run over by wheel of cart about 5 years ago.

Female, 85 years. Cancer of Breast. Received a knock on same breast 15 years ago.

Male, 57 years. Cancer of Lower Lip, Jaw, and Throat. Had lip scratched with barbed wire two years ago. He was a heavy smoker, and sometimes used a clay pipe.

Male, 52 years. Cancer of Leg. Leg injured previously by loom-side falling against it at foundry.

Male, 35 years. Cancer of Thigh. Strained by throwing hammer 12 months before.

Female, 50 years. Cancer of Œsophagus. Was in the habit of taking her food too hot.

HABITS OF PATIENTS.

A history of alcoholism was obtained in 19 cases, all males.

Tobacco was said to have been used to excess in 21 cases. Three of these had Cancer of Throat, one Cancer of Cheek, and another Cancer of the Palate.

Among these 21 cases were many cases of Hepatic Cancer.

In 7 female cases, chiefly of Cancer of the Intestinal Tract, little or no exercise was taken.

Two cases among women were attributed to worry and trouble.

A history of Indigestion of long duration was given in eight cases; the stomach was the organ affected in six of these.

Nine patients were very fond of meat in large quantities, and three were practically vegetarians.

Eleven had suffered for years from constipation. Four of these had the Cancer in their Intestines.

In a few cases Hæmorrhoids were associated with Cancer of the Rectum.

Two patients had previously had attacks of Jaundice many years before the Cancer manifested itself.

Though I inquired specially for a history of Diabetes, in no case did I learn of any.

OCCUPATIONS.

MALES :—

Cotton Spinners	7
Bricksetters' Labourers	3
Weavers	3
Iron-Fitters	2
Foundry Labourer	1
Painter	1
Farmer	1
Cattle-dealer	1
Tailor	1
Brewer	1
Cotton-mill Labourer	1
Plasterer	1
Machine-tenter	1
Cotton Manufacturer	1
Coppersmith	1
Cotton Grinder	1
House Builder	1
Schoolmaster	1
Cotton Sizer	1
Crane Driver	1
Watchmaker	1
Corn-mill Labourer	1
Beer-seller	1
Gardener	1
Licensed Victualler	1
Carter	1
Ironworks Labourer	1
School Caretaker	1
Hall Porter	1
Insurance Agent	1
Hairdresser	1
Loom Overlooker	1

FEMALES :—

Housework	17
-----------------	----

Weavers	14
Winders	9
Warpers	4
Dressmakers	2
Cotton Drawer	1
Tailoress	1
Farmer	1
Grocer	1
Lodging-house Keeper	1
Cardroom-hand	1
Confectioner	1
Charwoman	1
No occupation	3

Insanitary conditions were discovered at nine of the houses visited. The defects were reported, and steps taken to remedy them.

Dampness of varying degree was present in 15 houses out of 121 visited.

In eight houses there was a pantry, or larder, for the storage of provisions, etc. In the remainder the food was stored on the scullery shelves, in cupboards in the living-rooms, and, in not a few cases, on the kitchen table.

At one house I learnt that there had been three cats which had developed "sores." My informant could not say if these "sores" had been preceded by growths, but they were so offensive that the cats had to be destroyed.

Only in one instance was it discovered that there had been a previous case of Cancer in the same house. During the year 1912, a man died of Cancer of the Stomach. Five years previously his wife died in the same house, also of Cancer of the Stomach.

DEATHS FROM CANCER—1889-1912.

Year.	Males.	Females.	Total.
1889	20	32	52
1890	14	24	38
1891	19	34	53
1892	14	38	52
1893	23	37	60
1894	23	34	57
1895	33	48	81
1896	25	56	81
1897	28	44	72
1898	36	58	94
1899	28	52	80
1900	33	65	98
1901	27	64	91
1902	40	51	91
1903	35	57	92
1904	33	74	107
1905	46	67	113
1906	36	72	108
1907	45	68	113
1908	43	65	108
1909	43	64	107
1910	33	94	127
1911	40	73	113
1912	52	76	128

TUBERCULOSIS.

There were 142 deaths from Tuberculosis during 1912, compared with 164 deaths during 1911.

Of these 142 deaths, 109 were due to Phthisis or Tuberculosis of the Lungs.

During 1912 the death-rate from Tuberculosis was 1.06 per 1,000, and from Phthisis it was 0.81 per 1,000 living.

PHTHISIS.

During the year 1912, 184 notifications of Phthisis were received from medical men, 97 of which were males and 87 females, compared with 90 notifications received during 1911, and 75 during 1910.

Of these 184 notifications, 63 were private.

The following Table shows the number of notifications and deaths during 1912, arranged in months:—

NOTIFICATIONS.					
Jan.	Feb.	Mar.	April.	May.	June.
27	26	9	9	10	17
July.	Aug.	Sept.	Oct.	Nov.	Dec.
17	12	11	21	10	15

Total: 184.

The notifications of this disease are now being received more satisfactorily than ever before.

DEATHS.					
Jan.	Feb.	Mar.	April.	May.	June.
13	10	10	13	10	8
July.	Aug.	Sept.	Oct.	Nov.	Dec.
5	9	6	8	7	10

PUBLIC HEALTH (TUBERCULOSIS IN HOSPITALS) REGULATIONS.

During 1912, 40 notifications were received in connection with these Regulations from resident Medical Officers of Institutions where Phthisis patients were dealt with.

Of this number, three were out of the Borough, viz., two belonging to Darwen and one belonging to the Blackburn Rural District. These notifications were sent to the respective Medical Officers of Health.

The 40 notifications were received from the following Institutions, viz. :—

Meathop Sanatorium, Grange	27
Blackburn Infirmary	11
Royal Victoria Hospital, Netley	1
Brompton Hospital, London	1

Of these 40 patients, 7 were out-patients at these hospitals.

Thirty-seven notifications were received in connection with the Regulations relating to Poor-law patients during 1912, as follows :—

FORM A.

Notifications from Medical Officers of Poor-Law Institutions of persons in their Institutions suffering from Phthisis	33
---	----

FORM B.

Notifications from District Medical Officers of the Blackburn Union, of persons suffering from Phthisis in their districts	2
--	---

FORM C.

Notifications from Superintendent Officers of Poor-Law Institutions, notifying the removal of a Phthisis Patient from the Institution to another address	2
--	---

FORM D.

Notifications from Relieving Officers of change of address of Phthisis patients in their districts	0
--	---

Of these notifications, 8 were out of the Borough, and belonged to the following places, viz. :—Darwen, 5 ; Church, 1 ; Great Harwood, 1 ; and Shipley, 1.

DEATHS FROM PULMONARY TUBERCULOSIS.

Forty-six deaths have been investigated by Dr. Buchanan, and the following is his account of the work in this respect. Of these deaths, 23 were males and 23 females.

The total number of visits made was 70.

AGE-PERIODS AT WHICH DEATHS OCCURRED.

3 deaths occurred between 1 and 15 years of age.

11	„	„	15	„	25	„
22	„	„	25	„	45	„
10	„	„	45 years and upwards.			

DURATION OF ILLNESS.

In 2 cases the illness lasted 3 to 6 months.

„	7	„	„	6	„	12	„
„	11	„	„	1	„	2 years.	
„	3	„	„	2	„	3	„
„	9	„	„	3	„	4	„
„	2	„	„	5	„	6	„
„	2	„	„	6	„	7	„

In 1 case the illness lasted 8 years.

„	1	„	„	9	„
„	1	„	„	10	„
„	1	„	„	11	„
„	1	„	„	14	„
„	1	„	„	18	„
„	1	„	„	25	„

In the remaining three cases the duration of the illness was uncertain.

The length of time each person continued working, after the onset of the disease, was as follows:—

From 1 to 3 months 1 had continued at work.

„ 3 „ 6 „ 2 „ „

„ 6 „ 12 „ 7 „ „

„ 1 „ 2 years 7 „ „

„ 2 „ 3 „ 1 „ „

„ 4 „ 5 „ 2 „ „

„ 5 „ 6 „ 2 „ „

„ 6 „ 7 „ 2 „ „

One person continued working for 12 years, another for 17, and a third for 24 years after the onset of definite signs of illness.

The length of time in the remaining cases was not ascertained.

SOURCE OF INFECTION.

Information pointing to personal infection was obtained in the following cases:—

1. Female, aged 12, ill 8 months. Brother died of Consumption four years ago.

2. Male, aged 31, ill more than 6 years. Father died of Consumption 12 years ago.

3. Female, aged 24, ill about 12 months. Sister died of the disease 5 years ago.

4. Male, aged 31, ill 11 years. Mother died of Consumption 30 years ago. In this case it was admitted that deceased had never been well since he had Measles at the age of 4, three years after his mother's death. It would seem that his mother lived long enough after his birth to infect him, and that the attack of Measles so lowered his resistance as to allow the disease to become established.

5. Female, aged 24, ill 3 years. Mother died of the same disease 6 years previously. Three years later an attack of Influenza allowed the latent disease in the daughter to advance.

6. Female, aged 19, ill about 12 months. She lived with a sister who has had Tuberculosis of the Skin for about 7 years. Two of her companions, one of whom is still alive, were consumptives.

7. Male, aged 21, ill 9 months. Father, 8 years ago, and a sister, 3 months before, both died of Consumption.

8. Female, aged 28, ill 6 years. A friend who worked at same mill died 7 years ago of Consumption.

9. Female, aged 47, ill 3 years. Visited and helped to nurse a woman who died of Consumption 7 years ago.

10. Female, aged 50, ill 21 months. Husband died of Consumption 14 years ago.

11. Male, aged 49, ill more than 3 years. Mother died 8 years ago of the same disease.

12. Male, aged 20, ill 15 months. Mother, alive, is a Chronic Consumptive. There is also a Consumptive sister living.

13. Female, aged 35, ill 5 years. Was very friendly at the mill with a Consumptive man who still lives.

14. Male, aged 35, ill 5 years. He lived with a sister up to 9 years ago. She died of the same disease in 1911.

15. Female, aged 24, ill 12 months. Had three female companions, all of whom were Consumptive. One of these has since died of the disease.

16. Male, aged 49, ill 4 years. His wife, who is still alive, appears to have had the disease in earlier life, and to have been "cured." Six of her children, and ten of her brothers and sisters died of Consumption.

17. Female, aged 19, ill 3 years. Two paternal uncles died of Tuberculosis. Father, alive, is affected.

18. Male, aged 23, ill 14 months. Lived with family up to 5 years ago. Mother and several brothers and sisters died of Consumption.

19. Male, aged 43, ill 2 years. Four brothers died of Tuberculosis, the last 5 years ago.

20. Female, aged 35, ill 3 years. Father, mother, and sister died of Consumption.

21. Female, aged 49, ill 3 months, but had Bronchitis every winter for years. Brother died of Pulmonary Tuberculosis 4 years ago. She used to visit him when he was ill. She had previously lived with him. Her husband has now the same disease.

22. Male, aged 27, ill 9 months. Father and brother died of Consumption. Another brother is now affected.

23. Male, aged 37, ill $2\frac{1}{2}$ years. Sister and two brothers, with whom he formerly lived, died of Consumption.

24. Female, aged 28, ill 12 months, probably 6 years. Sister died of Consumption 11 years ago.

25. Female, aged 46, ill 8 months, but "was never strong." Mother died 44 years ago of the same disease.

26. Male, aged 14, ill 9 years. Mother, who is now alive and well, comes of a tubercular stock. Some years ago she had "chest trouble."

27. Female, aged 17, ill 6 months. Father is now suffering from the same disease.

SOCIAL HABITS AND STATUS.

In nine cases it was admitted that the deceased had indulged freely in alcohol.

There were only a few cases where the disease was attributed to overwork and being short of food.

Three of the deceased were said to have been careless and to have neglected themselves.

In 5 cases I was informed that the deceased had spent all their evenings in public-houses. In none of these cases was there any history of Consumption in the families of the patients.

Two or three female patients were said never to have gone out after coming home from work.

PREVIOUS ILLNESSES.

Influenza occurred in 4 cases.

Pleurisy	„	3	„
Measles	„	2	„
Bronchitis	„	2	„
Malaria	„	2	„ (both soldiers).

Infantile Paralysis, Pneumonia, Rheumatic Fever, Heart Disease following Rheumatic Fever, Appendicitis, Lead Poisoning, Erysipelas, Pneumonia with Whooping-Cough and Measles, Goitre, Fractured Ribs, and Otitis Media each preceded the tubercular disease in one case.

Some of these diseases were probably tubercular in nature.

Two female patients died after child-birth.

PREVIOUS TUBERCULAR DISEASE.

In addition to those included in the preceding list, Tubercular Adenitis and Tubercular Disease of the Spine each occurred once.

INSANITARY CONDITIONS AND OVERCROWDING IN HOUSES
CONTAINING PHTHISICAL PERSONS.

Number of rooms in a house :—

12	houses	contained	3	rooms.
15	„	„	4	„
17	„	„	5	„
1	house	„	8	„

Number of persons in a house :—

2	houses	each	contained	2	persons.
7	„	„	3	„	
11	„	„	4	„	
6	„	„	5	„	
7	„	„	6	„	
5	„	„	7	„	
2	„	„	8	„	
3	„	„	9	„	

One house contained 10 persons ; in another there were 11.

The average number of persons in a house was 5.3.

The number of occupants did not exceed 5 in 26 of the houses.

Of the seven houses containing 6 persons, one had 3 rooms, one had 4, four had 5, and the remaining one was 8-roomed.

Of the five houses containing 7 persons, two were 3-roomed and three were 5-roomed houses.

Of the two houses containing 8 persons, one had 4 rooms, the other 5.

Of the three houses containing 9 persons, one had 4 rooms, the other two had each 5.

The house with 10 occupants had 4 rooms, but there were only 3 rooms for the family of eleven.

Dampness was noticed in 8 houses, and 11 houses were badly lighted.

Darkness and dampness generally went together.

In two houses the living-room window would not open. In a few there was no trap on the sink-waste pipe, and in two with slop-water closets the tippler did not work satisfactorily.

In three houses, which were markedly damp, the dampness was due to the fact that the yard sloped towards the back-door, and in wet weather the back-kitchen was flooded owing to accumulation of dirt and rubbish in the gully.

Two ash-pits were found in a dilapidated condition.

Compared with former years, I noticed some improvement in the sanitary condition of yards common to two or more houses.

Condition of the houses :—

- 27 were clean.
- 14 were fairly clean.
- 5 were dirty.

Closet accommodation :—

- 29 had fresh-water closets.
- 5 had slop-water closets.
- 12 had pail-closets.

PRECAUTIONS TAKEN AT HOME.

Twenty-three persons had separate bedrooms when they became aware of the nature of the illness.

Four persons slept alone, but shared the bedroom with others.

Three persons had their beds brought down to the living-room.

Nine persons used the front room downstairs as a bedroom.

Two persons were removed to the Workhouse Infirmary, where both remained till death.

Eleven patients had been to Meathop Sanatorium, and one to the local Infirmary.

In nine cases there had been no isolation.

Forty patients were said to have burnt their sputum, and nineteen to have had separate food utensils.

Practically all of my informants declared that the deceased had the bedroom windows open but only in one case was I satisfied that open-air treatment was attempted.

The great majority had their windows open a few inches, and even then the inlet was almost blocked by a blind which was never fully drawn up.

PRECAUTIONS TAKEN AT WORK.

In one case I discovered that the deceased had carried a sputum-flask when at work and out for walks, and used it. He had been to Meathop Sanatorium.

In another case rags were used, which were subsequently destroyed.

PULMONARY TUBERCULOSIS NOTIFICATIONS.

The following is an analysis of the 126 cases investigated :—

SEX.

Seventy-seven were males and 49 were females.

AGE-PERIOD CLASSIFICATION.

	Males.	Females.
Under 10 years	4	3
Between 10 and 15 years	1	2
„ 15 „ 25 „	17	15
„ 25 „ 35 „	14	14
„ 35 „ 45 „	20	8
„ 45 „ 55 „	16	7
55 years and upwards	5	0

DURATION OF ILLNESS AT THE TIME OF INQUIRY.

11 had been ill from 1 to 3 months.

22 „ „ 3 to 6 „

18 „ „ 6 to 12 „

25 had been ill for 1 year.

12 „ „ 2 years.

9 „ „ 3 „

8 „ „ 4 „

2 „ „ 5 „

4 „ „ 6 „

2 „ „ 7 „

1 „ „ 8 „

1 „ „ 13 „

1 „ „ 14 „

1 „ „ 15 „

1 „ „ 21 „

1 „ „ 37 „

SOURCE OF INFECTION.

Personal infection was probably the source in the following cases :—

1. Female, 24 years, ill 3 years. Father, mother, and ten brothers and sisters died of Consumption in last 24 years.

2. Female, 32 years, ill 5 months. Lived with brother and sister 7 years ago, both of whom died of Consumption.

3. Female, aged 21 years, ill 6 months. Father died in same house 4 years ago of Consumption. A brother, still alive, has suffered from the same disease for nearly two years. Mother has also been "troubled with her chest."

4. Female, aged 19, ill about 4 years. Father died 13 years ago of the same disease.

5. Female, aged 18, ill 6 months. Maternal grandfather had Consumption as a youth, but lived till he was 69. Mother looks Phthisical, but refuses to be examined, as she dreads the result. (She has since been notified.)

6. Male, aged 26, ill 4 years (Tubercular Disease of the Spine at 2 years). Mother died 22 years ago of Phthisis.

7. Female, aged 31, ill 6 months. Brother, 7 years ago, and sister, 3 years ago, died of Consumption.

8. Female, aged 33, ill about 12 months. Mother dead 11 years, of the same disease.

9. Male, aged 36, ill 6 months. Wife died 3 years ago of Consumption.

10. Female, aged 26, ill 3 years. Father dead 4 years, of Phthisis. Sister also suffering now from Pulmonary Tuberculosis.

11. Male, aged 33, ill 3 years. Father died 30 years ago of Phthisis, and son (5) has Tubercular Disease of Hip-joint.
12. Male, aged 42, ill 4 months. Wife has had a cough almost all her life. Her stepmother died of Consumption.
13. Male, aged 35, ill 3 years. Brother died of Hæmoptysis 20 years ago.
14. Male, aged $8\frac{1}{2}$, "always ill." Father's sister died of Consumption, and father has suffered with his chest.
15. Male, aged 49, ill 2 years. Mother died in same house, of Consumption, last year.
16. Female, aged 25, ill 3 months. Father (alive) has the same disease; also a sister.
17. Female, aged 15, ill 6 months. Father died 2 years ago of Phthisis of 30 years' standing.
18. Female, aged 23, ill 7 months. Mother has the same disease.
19. Male, aged 21, ill a few months. Aunt died in the same house 2 years ago, and mother died 14 years ago, of Consumption. Sister has had a "tubercular knee."
20. Male, aged 40, ill 12 weeks. Mother and sister both died of Consumption. (Daughter has had Tubercular Adenitis.)
21. Male, aged 21, ill 4 months. Mother dead 5 years, of Consumption. (Sister now suffering.)
22. Female, aged 30, ill 6 months. Father and brother died of Phthisis. (Sister's husband now has the disease.)
23. Female, aged 18, ill 1 year. Mother has had Pulmonary Tuberculosis but is now well.

24. Male, aged 16, always delicate, ill 14 months. Brother died 3 years ago in the same house, of Consumption of the Bowels. I examined the father, and found that he had the disease in the lungs.

25. Male, 8 months, delicate from birth, acutely ill 1 month. Father has gone abroad because he had the disease. Mother recovering from Phthisis now.

26. Male, aged 47, ill 3 months. Mother is a chronic sufferer from Pulmonary Tuberculosis, and six brothers and sisters died of it. (Son now has the disease.)

27. Female, aged 20, ill 3 months. Father and brother died of Tuberculosis in the same house recently.

28. Male, aged 46, ill 3 years. Wife died of Phthisis 9 years ago, also two children, 9 and 5 years ago.

29. Male, aged 51, ill 2 years. Father died of Consumption.

30. Female, aged 35, ill 1 month. Brother died of Phthisis last year.

31. Male, aged 45, ill 6 years. Father died of Phthisis 15 years ago.

32. Female, aged 31, ill 15 years. Brother and sister died of the same disease, also a son and daughter (another daughter suffering now).

33. Female, aged 7, ill $2\frac{1}{2}$ years. Father died 3 years ago of Consumption.

34. Female, aged 25, ill 9 months. Two aunts died of Phthisis.

35. Female, aged 6, ill over 12 months. Father, abroad, has Consumption. Mother and two sisters also have this disease.

36. Female, aged 37, ill 14 months. Father died of Phthisis 28 years ago. Five brothers and sisters died in infancy. Brother has gone to Canada on account of same disease.

37. Male, 6 years, ill 3 months. Father has Consumption.

38. Male, aged 18, ill 4 years. Father died of Phthisis 4 years ago, also sister "several years" ago.

39. Female, aged 50, ill 12 months. Husband dead 6 years, of Pulmonary Tuberculosis.

40. Male, aged 16, ill 2 years. Slept with brother who had the disease but is now well. Mother died of Consumption 5 years ago.

41. Female, aged 42, ill 4 years. Mother, whose sister died of Consumption, is a chronic sufferer.

42. Female, aged 13, ill 3 months. Mother is a chronic consumptive.

43. Female, aged 17, ill 12 months. Mother has had the disease, but is now well.

44. Male, aged 20, ill 13 years. Mother died of Meningeal Tuberculosis, 2 years ago. Sister died last year, in the same house, of Pulmonary Tuberculosis.

45. Male, aged 35, ill 8 years. Mother died 14 years ago of Consumption, also father at same time. Six brothers have died of Consumption since then.

46. Female, aged 45, ill 6 years. Two brothers died of Consumption of Bowels.

47. Male, aged 50, ill 12 months, but never strong. Mother died of Phthisis 40 years ago. Father died 27 years ago of the same disease.

48. Female, aged 21, ill 12 months. As a baby was nursed by aunt, who died 20 years ago of Phthisis.

49. Male, aged 37, ill 1 year. Father died 7 years ago of Phthisis. Two brothers also died of Phthisis.

50. Female, aged 29, ill 7 years. Brother died 6 years ago of Meningeal Tuberculosis.

51. Female, aged 39, ill 6 months. Mother died of Phthisis 20 years ago. Husband is now suffering from Consumption.

52. Female, aged 29, ill 14 months. Brother died last year of Consumption.

53. Male, aged 29, ill 2 years. Both parents died of Phthisis when he was a baby.

54. Male, aged 40, ill 5 or 6 years. Wife, who comes of a tubercular stock, has had Consumption but is now well.

55. Female, aged 28, ill 21 years. Father died of Phthisis 10 years ago. Mother now has the same disease.

56. Male, aged 54, ill 12 months. Mother, seven brothers and sisters died of Consumption.

57. Male, aged 31, ill 6 months. Father, mother, and brother died of Phthisis over 20 years ago.

58. Male, aged 32, ill 5 years. Mother and two brothers died of Consumption. Father has the disease now.

59. Female, aged 35, ill 12 months. Sister died 2 years ago of Consumption. Brother now suffering. (Husband died of the same disease 3 years ago.)

60. Male, aged 14, ill 5 months. Father died of Tuberculosis.

61. Male, aged 49, ill 3 months. Parents, one brother, and two sisters died of Phthisis.

62. Male, aged 62, ill 14 years. Mother and five brothers died of Consumption in the last 20 years.

63. Male, aged 54, ill 6 months. Both parents died of Consumption.

64. Male, aged 33, ill 15 months. Father died four years ago of Pulmonary Tuberculosis.

65. Female, aged 52, ill 1 month. Father dead 15 years, of Consumption. Sister now suffering.

66. Male, aged 19, ill 15 months. Used to visit a dying consumptive and sit for hours by his bedside.

67. Male, aged 37, ill 3 years. Wife dead 12 months, of Pulmonary Tuberculosis.

68. Female, aged 32, ill 12 months. Father died recently of Phthisis.

69. Female, aged 29, ill 12 months. Father died 12 years ago of Phthisis. Mother now suffering.

70. Male, aged 30, ill 3 months. Father, 14 years ago, and mother, last year, died of the same disease.

71. Male, aged 60, ill 37 years. Mother died 50 years ago of Consumption.

72. Male, aged 49, ill 3 years. Wife now suffering. Son died last year of Abdominal Tuberculosis.

73. Male, aged 56, ill 2 years. Father died 48 years ago of Phthisis. Wife, 25 years ago, also died of Phthisis.

74. Male, aged 39, ill 2 years. Acted as orderly in a hospital in India, where Phthysical patients were being nursed. He blames his disease on the fact that he had to shake dusty mats.

75. Male, aged 38, ill 3 years. Followed a Consumptive patient in an office. The latter used to lick his fingers when sorting dockets.

76. Female, aged 24, ill 6 months. Sister, with whom she slept, died last year of Phthisis.

OCCUPATIONS.

Weavers	33
Winders	10
Cardroom-hands	7
Overlookers	3
Drawers-in	2
Reachers	2
Warpers	2
Cotton Spinners	2
Ring-Spinner	1
Cotton-mill Labourer	1
Taper	1
Labourers	8
At School	6
Iron-turners	4
Tailors	3
Domestic Service	2
Gardening	2
Carters	2
Clerks	2
Laundress	1
Fruiterer	1
Joiner	1
Fitter	1
Corn Dealer	1
Bolt-works Labourer	1

Civil Service	1
Miner	1
Coach-trimmer	1
Hospital Nurse	1
Rag-sorter	1
Blacksmith	1
Plasterer	1
Cabinet-maker	1
Florist	1
Locomotive Fireman	1
Printer	1
Dressmaker	1
Errand Boy	1
Plumber	1
School Teacher	1
Boxmaker	1
Stonemason	1
Soldier	1
No occupation	4

PREVIOUS ILLNESSES.

In eleven cases the Pulmonary Tuberculosis was preceded by Pneumonia.

Pleurisy had occurred in eight cases, and Influenza and Typhoid Fever each in six instances.

Measles and Bronchitis each had occurred in five cases.

In three cases there was a history of Rheumatism, and in the same number a history of Malaria.

Fractured Ribs had occurred in the case of three patients, while another had had a bullet wound in the chest.

Rheumatic Fever, Insanity, and Whooping-Cough were previous illnesses in two cases each.

In two cases the illness took on an acute form after child-birth.

Hemiplegia, Injury to Spine, Abdominal Tumour, Dropsy, Septicæmia, Heart Disease, Anæmia, Asthma, Dysentery, and Cholera had each occurred as a previous illness in one case.

It is very probable that many of these "previous" illnesses were really tubercular in nature.

PREVIOUS TUBERCULAR DISEASE.

Cervical Adenitis had occurred in six cases, as a rule in early life.

Caries of the Spine and Ischio-Rectal Abscess had occurred in two cases.

Other previous tubercular diseases were Hip-joint disease and Ankle-joint disease, each in one case.

HABITS, ETC., OF PATIENTS.

No less than thirty-one patients admitted having taken alcohol to excess, while twenty confessed to excessive smoking. Five of the latter were cigarette smokers.

Three patients told me that they used to spend every evening after work at the public-house. In these cases there was no family history of Consumption, and it is not improbable that the public-house was the source of infection.

Seven female patients said that after coming from the mill they spent the rest of the evening at home, and rarely went for a walk, even at week-ends.

In six instances I was informed that the patients were short of food, and overworked. In six other cases the patients had been careless in their habits and had neglected themselves.

Three patients, doing ordinary work, had yet been short of food ; while five had been overworked but had always had enough nourishment.

SANITARY CONDITION OF HOUSES.

Eleven cases were notified from Common Lodging-houses, five from Houses Let in Lodgings, and one from the Workhouse.

Dampness was noticed in 35 houses. This was seldom due to defects in the roof, but was frequently owing to the surface of the yard being above the level of the back-kitchen.

Twenty-one houses were dark. In many cases some of this darkness was due to blackened ceilings and gloomy wallpaper, as well as to the narrowness of the street in which the house was situated, and the obstruction of light by surrounding buildings.

On the other hand, the occupants of these houses are in a large measure to blame for their gloomy condition. For, in many streets in the Borough, more light will enter through the upper fourth of a downstairs window than through the lower three-fourths ; but little or none is allowed to do so. In the large majority of the poorer houses visited, this direct light was cut off by the blinds, which were never pulled up to the top, but remained down at least a quarter of the window-depth.

Further light was excluded by closely-drawn curtains, especially in the front room. The presence of these curtains was frequently given as an explanation of the closed window, for open windows would mean more washing of curtains.

When I suggested dispensing altogether with hanging curtains, in one case, I was met with the retort, " What would the neighbours say ? "

Assuming that the primary object of window curtains is to ensure privacy in the home, a better plan would be to give up the long curtains which obstruct light, gather dust, and require much

washing, and replace them by cheap muslin, across the lower window sash, sufficiently high to prevent passers-by from seeing inside the room.

I have noticed recently in some of the newer houses that the upper third of the window has coloured glass which cuts out the best light from the room. The more sensible plan would be to have the non-transparent glazing in the lower third. Curtains would then be unnecessary.

Darkness and dampness frequently existed together in the houses I visited.

Of nearly two hundred houses inspected, I could only say that two were not reasonably fit for human habitation. Both were old and dilapidated.

In not a few houses I found that the sink-waste pipe had no trap. In one instance there was no waste-pipe to the slopstone.

The closet accommodation generally was satisfactory. I found one slop-water closet out of order, and the flushing-rim of one water-closet broken.

Where pail-closets existed there were several complaints of the smells from them in hot weather.

NUMBER OF ROOMS IN A HOUSE.

Six houses had only one room. These were chiefly houses let in lodgings.

In two cases there were three occupants in the room. In one case the patient was the only person, and each of the remaining three rooms had another occupant in addition to the sufferer.

38 houses had each 3 rooms.

36 „ „ 4 „

29 „ „ 5 „

3 „ „ 6 „

1 house, with 4 occupants, had 9 rooms.

In calculating the number of rooms per house, I have left out of account those rooms which are neither used as bedrooms nor living-rooms.

The number of bedrooms is generally the same (2) in the 3-roomed and 4-roomed houses. Both houses are of the 2-up and 2-down class. In what is here called a 3-roomed house, the front room downstairs is used as a living-room, while the back-room serves the purpose of a scullery and wash-house. On the other hand, in the "4-roomed" house, which is no larger than the other, the living-room is the back-kitchen, and the "front-place" is reserved for week-end use. The living-room, accordingly, is also the scullery, etc.

Of the 38 houses with 3 rooms,

4 houses had each 2 occupants.

3 " 3 "

9 " 4 "

5 " 5 "

8 " 6 "

7 " 7 "

1 house had 8, and 1 had 9 occupants.

Of the 36 houses with 4 rooms,

4 houses had each 2 occupants.

11 " 3 "

3 " 4 "

7 " 5 "

3 " 6 "

5 " 7 "

3 " 8 "

Of the 29 houses with 5 rooms,

4 houses had each 3 occupants.

4	„	4	„
5	„	5	„
2	„	6	„
5	„	7	„
4	„	8	„
2	„	9	„
3	„	10	„

Of the three 6-roomed houses, one had 6 occupants, another had 7, and the third had nine.

Taking all the houses visited, the average number of occupants was,

2.1 in the 1-roomed houses.

5.0	„	3-roomed	„
4.6	„	4-roomed	„
6.2	„	5-roomed	„
7.3	„	6-roomed	„

It will be observed that in houses with only one living-room available there were in 18 instances more than five persons.

To these might be added 11 cases from the 4-roomed houses and 16 cases from the 5-roomed houses; for, although in these latter there is a second living-room, it is only used at the weekend.

This overcrowding in the living-room, after working hours, is, I believe, in the case of a careless consumptive (and the majority are scientifically careless), a not inconsiderable source of infection.

In both the 3-roomed and 4-roomed houses there are only two bedrooms.

In the 3-roomed houses the average number of persons per bedroom was 2.5, but in nearly half of these houses the average was over 3.3.

In the 4-roomed houses the average number of persons in a bedroom was 2.3. In one-third of these houses the number was 3.5.

It seldom happens that a consumptive patient can have a separate bedroom in a house with less than three bedrooms.

SANITARY ACCOMMODATION.

72	houses	had	fresh-water	closets.
44	„		pail-closets.	
7	„		slop-water	closets.

CLEANLINESS OF HOUSES.

71	houses	were	clean.
30	„		fairly clean.
26	„		dirty.

PRECAUTIONS TAKEN AT HOME.

Twenty-five patients had a separate bedroom.

Fourteen patients had a separate bed, but shared the room with others.

Eleven patients were sleeping in the living-room.

All of these were confined to bed.

One patient used the yard to sleep in during the hot weather.

In three cases the front room downstairs had been converted into a bedroom.

In 74 cases there had been no attempt at isolation by night prior to my visit.

I learnt that one consumptive slept across the foot of the bed in which were two other persons.

Fifty-three patients disposed of their sputum by burning, and 18 had separate feeding utensils.

Bedroom windows were generally kept open at night, but only a few inches. It was quite the exception to find a living-room window open except on the very hottest days. In one instance where the patient was in bed in a small living-room, in which were his wife and child, the reason given for not opening the window was that the "neighbours would talk about it."

I find that patients are brought down to the living-room because they do not like to be left alone upstairs. Another reason is that it is less trouble for those who are attending to them. The best, and, therefore, the largest, bedstead is brought down with the patient. It frequently takes up more than a quarter of the floor-space.

Consumptives who sleep in the living-room seldom recover. This is not to be wondered at when we consider the lack of air-space and ventilation, the loss of appetite consequent on the high temperature of the room and the sickly odour of cooking food, the overcrowding, and the generally enervating character of the environment.

It is also bad for the rest of the family, inasmuch as a careless consumptive, every time he coughs, sends out a germ-laden spray into the atmosphere, especially when the disease is advanced and progressive, as it generally is in the case of patients who live and sleep in the living-room.

I visited a woman in a poor house in a poor street, and found her in a large bed in the living-room. The room was dark, dirty, and small. The doors and window were closed. On opening

the door I could detect the characteristic odour of the sputum, which was teeming with bacilli. There were flies in abundance, and the jam-pot for collecting the sputum was uncovered. The patient took no precautions when coughing. Round her bed and by the fire were her husband and five children, all within the danger zone. There was no one in the house earning any money.

PRECAUTIONS TAKEN AT WORK.

Nine patients carried a sputum-flask which they used outside and at work.

One man who used paper to spit in at his work had to leave two different mills because he took this necessary precaution. His carefulness drew attention to his condition, and his fellow-workers refused to have him with them.

Several of the patients visited had received institutional treatment.

Twenty-three had been to Meathop Sanatorium. Four had been to other Sanatoria.

Nine had been treated in the Tuberculosis Wards of the Borough Isolation Hospital.

Ten had been in-patients or out-patients at the local Infirmary, and twenty had been for varying periods in the Union Infirmary.

The following are particulars respecting cases of Phthisis who have been admitted to and discharged from Meathop Sanatorium :—

Case 1.—C.C., male, age 37. Admitted November 27th, 1911, and discharged February 10th, 1912. His weight on admission was 8st. 5lbs., and on discharge 9st. 10lbs. He had, therefore, gained 19lbs. Tubercle bacilli were present in his

sputum on discharge. This patient was very much improved on discharge.

Case 2.—W.C., male, age 31. Admitted November 25th, 1911, and discharged March 23rd, 1912. His weight on admission was 9st. 2lbs., and on discharge 10st. 4 $\frac{1}{4}$ lbs. He had, therefore, gained 16 $\frac{1}{4}$ lbs. Tubercle bacilli were present in his sputum on discharge. This patient was improved on discharge.

Case 3.—F.D., male, age 19. Admitted January 12th, 1912, and discharged March 23rd, 1912. His weight on admission was 8st. 13 $\frac{1}{2}$ lbs., and on discharge 9st. 6 $\frac{1}{2}$ lbs. He had, therefore, gained 7lbs. This patient was improved on discharge.

Case 4.—E.J.D., female, age 33. Admitted December 15th, 1911, and discharged March 29th, 1912. Her weight, on admission, was 6st. 4 $\frac{3}{4}$ lbs., and on discharge 7st. 5 $\frac{1}{2}$ lbs. She had, therefore, gained 14 $\frac{3}{4}$ lbs. Tubercle bacilli were present in her sputum on her discharge. She was much improved.

Case 5.—E.W., female, age 35. Admitted September 28th, 1911, and discharged March 29th, 1912. Her weight on admission was 6st. 7lbs., and on discharge 7st. 3 $\frac{3}{4}$ lbs. She had, therefore, gained 10 $\frac{3}{4}$ lbs. Tubercle bacilli were present in her sputum on discharge. This patient was much improved on discharge.

Case 6.—E.F., female, age 18. Admitted December 9th, 1911, and discharged May 4th, 1912. Her weight on admission was 6st. 11lbs., and on discharge 7st. 2lbs. She had, therefore, gained 5lbs. This patient was slightly improved on discharge.

Case 7.—R.M., male, age 38. Admitted February 15th, 1912, and discharged May 14th, 1912. His weight on admission was 8st. 4 $\frac{1}{4}$ lbs., and on discharge 9st. 10 $\frac{1}{4}$ lbs. He had, therefore, gained 20lbs. Tubercle bacilli were present in his sputum on discharge. He had done extremely well at the Sanatorium, and, given favourable circumstances, should remain in good health.

Case 8.—J.T., male, age 48. Admitted March 25th, 1912, and discharged June 8th, 1912. His weight on admission was 10st., and on discharge 9st. 13½lbs. He had, therefore, lost ½lb. This patient was much improved on discharge.

Case 9.—J.G., male, age 30. Admitted May 7th, 1912, and discharged August 20th, 1912. His weight on admission was 10st. 5lbs., and on discharge 11st. 11½lbs. He has, therefore, gained 20½lbs. Tubercle bacilli were present in his sputum on discharge. This patient had made very satisfactory improvement, and the disease had been arrested when discharged.

Case 10.—M.P., female, age 31. Admitted June 17th, 1912, and discharged September 14th, 1912. Her weight on admission was 7st. 1½lbs., and on discharge 7st. 4¼lbs. She had, therefore, gained 2¾lbs. Tubercle bacilli were present in her sputum on discharge. This patient was not very much improved on discharge.

Case 11.—R.S., male, age 37. Admitted March 16th, 1912, and discharged September 18th, 1912. His weight on admission was 9st. 3lbs., and on discharge 10st. 9¾lbs. He had, therefore, gained 20¾lbs. Tubercle bacilli were present in his sputum on discharge. This patient was greatly improved on discharge, and fit for light outdoor employment.

Case 12.—T.R., male, age 38. Admitted September 18th, 1912, and discharged September 28th, 1912. This patient was in the Sanatorium too short a time for any definite result to be noted.

Case 13.—F.J., female, age 22. Admitted March 30th, 1912, and discharged October 17th, 1912. Her weight on admission was 7st. 13¼lbs., and on discharge 10st. 0¾lbs. She had, therefore, gained 29½lbs. Tubercle bacilli were present in her sputum on discharge. This patient was very much improved on discharge.

Case 14.—L.K., male, age 32. Admitted May 4th, 1912, and discharged October 17th, 1912. His weight on admission was 8st. 12½lbs., and on discharge 10st. 0¼lb. He had, therefore, gained 15¾lbs. Tubercle bacilli were present in his sputum on discharge. This patient was greatly improved on discharge.

Case 15.—G.A., male, age 27. Admitted August 10th, 1912, and discharged November 30th, 1912. His weight on admission was 9st. 4½lbs., and on discharge 11st. 3½lbs. He had, therefore, gained 27lbs. Tubercle bacilli were present in his sputum on discharge. This patient was very much improved on discharge.

Case 16.—J.E.R., male, age 21. Admitted May 16th, 1912, and discharged November 30th, 1912. His weight on admission was 8st. 12lbs., and on discharge 10st. 1¼lbs. He had, therefore, gained 17¼lbs. Tubercle bacilli were present in his sputum on discharge. This patient left the Sanatorium without the permission of the Medical Superintendent.

Case 17.—E.C., female, age 30. Admitted September 26th, 1912, and discharged December 7th, 1912. Her weight on admission was 7st. 7lbs., and on discharge 8st. 1¼lbs. She had, therefore, gained 8¼lbs. Tubercle bacilli were present in her sputum on discharge. She was improved on discharge.

Case 18.—P.C., male, age 22. Admitted September 28th, 1912. This patient died at the Sanatorium on December 28th, 1912.

During the year, in connection with the Sanatorium Benefits under the National Insurance Act, the Medical Officer of Health was appointed Chief Executive Officer to the Blackburn Insurance Committee, and Dr. Buchanan was appointed Tuberculosis Officer.

Throughout we have both been in close touch with Mr. Henry Whittaker, the Clerk to the local Insurance Committee.

A Pavilion at the Fever Hospital, containing 25 beds, has been set aside for consumptive patients.

There are also 12 beds at the Meathop Sanatorium in Westmorland, subsidised by the Blackburn Corporation.

A Tuberculosis Dispensary for clinical examination of patients and for Tuberculin injections has been established at the Health Office on Monday and Thursday evenings.

A Tuberculosis Nurse will commence her duties in home visitation at an early date.

DISINFECTION IN PHTHISIS.

Seventy-seven rooms at 71 houses, where deaths from Phthisis had occurred, were disinfected, and, in addition, 42 rooms at 28 houses were disinfected after a Phthisis patient had been removed to Sanatorium.

The following articles were removed and disinfected:—

79	Beds.
54	Mattresses.
60	Bolsters.
143	Pillows.
55	Sheets.
61	Blankets.
94	Quilts.
100	Carpets.
42	Suits of Clothes.
325	Sundries.

The following articles were destroyed by consent of the owners:—8 beds, 15 mattresses, 3 bolsters, 1 sheet, 1 blanket, 6 carpets, 1 suit of clothes, and 11 sundries.

TABLE XLII.

PULMONARY TUBERCULOSIS IN BLACKBURN.

Year.	Deaths.	Death Rate (per 1,000).	
1881	1.90	} 1.720
1882 .....	.....	1.80
1883 .....	.....	1.90
1884 .....	.....	1.70
1885 .....	.....	1.30
1886	1.80	} 1.624
1887 .....	.....	1.50
1888 .....	.....	1.50
1889	187	1.52	
1890	214	1.80	
1891	163	1.35	} 1.206
1892	132	1.09	
1893	134	1.10	
1894	148	1.20	
1895	160	1.29	
1896	142	1.14	} 1.182
1897	149	1.19	
1898	154	1.22	
1899	152	1.20	
1900	148	1.16	
1901	150	1.17	} 1.070
1902	163	1.25	
1903	122	0.93	
1904	125	0.94	
1905	142	1.06	
1906	124	0.92	} 0.956
1907	133	0.98	
1908	148	1.09	
1909	136	0.99	
1910	110	0.80	
1911	119	0.89	
1912	109	0.81	

TABLE XLIII.
Deaths from Tuberculosis for Ten Years.

	1903.		1904.		1905.		1906.		1907.		1908.		1909.		1910.		1911.		1912.	
	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate	Deaths	Death Rate
General Tuberculosis ..	8	0.06	10	0.07	17	0.12	14	0.10	8	0.05	15	0.11	9	0.06	12	0.08	11	0.08	...	...
Tabes Mesenterica.....	28	0.21	40	0.30	27	0.20	34	0.25	36	0.26	28	0.20	23	0.16	22	0.16	13	0.09	15	0.11
Tubercular Meningitis	47	0.35	28	0.21	33	0.24	24	0.17	36	0.26	16	0.11	22	0.16	15	0.10	13	0.09	8	0.05
Phthisis	122	0.93	125	0.94	142	1.06	124	0.92	133	0.98	148	1.09	136	0.99	110	0.80	119	0.89	109	0.81
Other Forms	8	0.06	8	0.06	7	0.05	6	0.04	9	0.06	10	0.07	9	0.06	7	0.05	8	0.06	10	0.07
Total	213	1.62	211	1.59	226	1.70	202	1.51	222	1.65	217	1.60	199	1.46	166	1.21	164	1.23	142	1.06

FACTORIES AND WORKSHOPS.

The Factory and Workshop Act of 1901 has again been well administered during the year, and many important improvements have been carried out, especially at factories.

One of my Inspectors, namely, Inspector Kenyon, devotes his whole time to these important provisions, and the following is an account of his work for 1912.

There are 841 workshops, containing 1,021 rooms, of which 43 are underground, on the register for the year ending December 31st. 1912. These include 84 domestic workshops and 76 new tenants, from whom notices of occupation have been received, thus showing an increase of 10 after the register has been corrected and the factories and removals deducted.

The approximate number of males employed in these workshops is 1,524, and the approximate number of females is 1,154, as compared with 1,544 males and 1,140 females respectively in 1911.

The inspections of the above workshops have slightly increased, and the visits to factories have also increased. The visits to factories numbered 334, and the visits to workshops 1,756, as compared with 325 and 1,557 such visits respectively to factories and workshops during 1911.

A summary of 3,236 visits may be seen in Table XLV.

The 263 defects found have been set forth in Table XLVI., of which 217 have been remedied, as shown in Table XLIV. In addition to these, 47 outstanding defects have been remedied during 1912, making a total of 264 defects remedied altogether during the year 1912. The 46 outstanding defects at present are for nuisances found during the latter part of 1912, and which are expected to be remedied before the close of this year (1913).

I would point out that, so far, it has been unnecessary to resort to legal proceedings in order to compel the defaulters to comply with my notices to remedy the defects found.

I.—SANITARY CONDITIONS AT WORKSHOPS.

(a) CLEANLINESS.

Three workshops were found to have dirty floors or windows.

Nine workshops were found to have dirty yards, and 89 rooms required lime-washing at the Inspector's visit, as compared with 52 such rooms in 1911.

(b) AIR SPACE.

No rooms were found to be overcrowded, as compared with three overcrowded rooms in 1911.

(c) VENTILATION.

Five workrooms were found to be deficient in ventilation, or the means of ventilation were not maintained satisfactorily, compared with 8 in 1911, 18 in 1910, 10 in 1909, 8 in 1908, and 8 in 1907.

Two of the above workrooms were visited by H.M. Inspector, and samples of air were collected, which showed an excessive amount of Carbon Dioxide Gas present. These were notified to me, and notices were sent for the ventilation to be improved.

In addition to the above, three gas-stoves had been fixed, and means for carrying away the fumes generated had not been provided. The necessary notices were sent and complied with.

(d) DRAINAGE OF FLOORS ON WHICH WET PROCESSES ARE CARRIED ON.

These processes include tripe-boiling establishments, laundries, etc., and the drainage of these floors has been so satisfactory that there has only been cause for complaint in one instance, namely, a laundry where the floor was unsuitable.

SANITARY CONVENIENCES IN WORKSHOPS.

The following is the character of the sanitary conveniences at the various workshops :—

714 Water-Closets.

181 Pail-Closets.

These figures show some improvement as compared with 1911 :—

701 Water-Closets.

190 Pail-Closets.

There is obviously room for further improvement in this respect.

Notices outstanding at the end of the year 1911 were in connection with the following requirements at 7 factories :—

Additional sanitary accommodation required i

Repairs or reconstruction of sanitary conveniences
required 27

Other defects not enumerated here are shown in Table XLVI.

During 1912, notices for the provision of the following requirements were issued to 21 factories and four workshops :—

Additional sanitary accommodation at factories ... 6

Additional sanitary accommodation at workshops ... 0

6

Repairs or reconstruction of sanitary conveniences at
factories 16

Repairs or reconstruction of sanitary conveniences at
workshops 46

62

SANITARY CONVENIENCES IN FACTORIES.

The following appears in Section 5, Factory and Workshop Act, 1901 :—

(1) Where it appears to an Inspector that any act, neglect, or default in relation to any drain, water-closet, earth-closet, privy, ashpit, water supply, nuisance, or other matter in a factory or workshop, is punishable or remediable under the law relating to Public Health, but not under this act, that Inspector shall give notice in writing of the act, neglect, or default to the District Council in whose district the factory or workshop is situate, and it shall be the duty of the District Council to make such inquiry into the subject of the notice, and take such action thereon as seems to that Council proper for the purpose of enforcing the law, and to inform the Inspector of the proceedings taken in consequence of the notice.

Eighty-two notifications under the above (Section 5, Factory and Workshop Act, 1901) have been received from H.M. Inspectors. Sixteen of these were for factories and sixty-six for workshops, as follows :—

NOTIFICATIONS FROM H.M. INSPECTORS OF FACTORIES
WITH RESPECT TO FACTORIES.

ALBION STREET.—“ The women’s sanitary accommodation was insufficient and in a very insanitary condition. Some of the conveniences were unsuitable in that they adjoined the men’s conveniences, and opened directly off the mill.” Arrangements were made with the owners, and recently the matter has been placed in the hands of an engineer, with instructions to see the work carried out.

HIGH STREET.—“ Considerable effluvia in the workroom, said to be due to a stable immediately below.” Notice was sent and a wall was erected which entirely disconnects the aforementioned stable from the workroom.

FURTHERGATE.—“ Both sexes employed ; separate, proper sanitary accommodation required.” Separate and proper sanitary accommodation was provided for the sexes, on receipt of notice.

THORNBUR STREET.—“ Closet accommodation very unsuitable ; old privy. Should be converted to a proper W.C.” A suitable water-closet was provided on receipt of notice.

DIXON STREET.—“ Sanitary accommodation very poor ; construction bad. Improved accommodation desirable.” Notice was sent, and a modern sanitary convenience was erected.

PINE STREET.—“ No sanitary accommodation provided.” A suitable sanitary convenience was erected on receipt of notice.

MAPLE STREET.—“ No sanitary accommodation for the 12 employees.” A suitable sanitary convenience was erected on receipt of notice.

BACK COURT STREET.—“ Tub-closet in Back Union-street not cleansed properly, and without door and fastening for same where tub is withdrawn.” A notice was sent, and the closet was cleansed, but the cavity is still without a door and fastening.

GRIMSHAW PARK.—“ Closet in cardroom very insanitary ; effluvia very noticeable. The arrangement consists of old cesspool, etc. Should be converted to proper W.C.'s, trapped, etc.” A notice had been issued, which covered the above work, and the insanitary closets and cesspool have been abolished and four modern sanitary conveniences erected instead.

CUMPTNEY STREET.—“ Sanitary accommodation insanitary, in that the trough water-closet communicates directly with the winding-room.” A notice was sent, and intervening spaces

were provided to three sanitary conveniences, but they were not quite satisfactory. The alterations are now in progress.

AUDLEY RANGE.—“ Pool of water on floor of women’s sanitary convenience ; apparently the floor requires re-setting.” The flags were re-set, so as to drain to a surface water-gulley, on receipt of notice. The doors of the closets were also repaired and provided with fasteners.

KAY STREET.—“ Effluvia from sanitary convenience at bottom end of shed ; apparently due to infrequent flushing or defective trap.” A new supply pipe was provided for the flushing cistern, the pedestal cleansed thoroughly, and the means of ventilation for the closet were unstopped, on receipt of notice.

STARKIE STREET.—“ W.C.’s in yard have no flushing arrangements at present ; same broken down.” The flushing cistern was repaired on receipt of notice.

KAY STREET.—“ Urinal on landing to second mule-room very insanitary.” An up-to-date urinal was fixed, and provided with light, ventilation, and an impervious floor, on receipt of notice.

HOLLIN BRIDGE STREET.—“ Sanitary convenience constructed with no intervening ventilated space.” No notice was sent.

GOIT STREET.—“ Two sanitary conveniences for 38 men, pails only. No proper seats, bad approach, and dirty place for sanitary conveniences. New ones required.” A notice was sent for two modern sanitary conveniences to be provided, but the time allowed has not yet expired.

In addition to the above notifications received from H.M. Inspectors, the following complaints have been sent to me from other sources, and have been investigated by my Inspector :—

WHALLEY NEW ROAD.—“ Sanitary conveniences for winders in an unsatisfactory condition.” Notice was sent, and they were demolished, and modern sanitary conveniences were erected satisfactorily.

CECIL STREET.—“ Sanitary conveniences in an unclean condition.” Notice was sent, and the W.C.’s were cleansed forthwith.

WHALLEY NEW ROAD.—“ Absence of sanitary accommodation.” This was in connection with a new mill in course of erection. The architect and owners were communicated with, and the completion of the sanitary accommodation was pressed forward.

OAK STREET.—“ Sanitary conveniences, for women, in a dirty condition.” A letter was sent, and the W.C.’s were cleansed, but several defects were found in the W.C.’s for males, on an inspection being made. These have not yet been remedied.

The following is the list of Outstanding Notices at the end of the year 1911, and of work carried out during 1912, in connection with factories :—

BACK CORT STREET.—“ Sanitary conveniences are unsatisfactory.” Notices have been sent, but the work has not been started.

ALBION STREET.—“ Closets in spinning-rooms not ventilated to outside ; effluvia very evident.” Plans were submitted for the whole of the sanitary conveniences to be erected in the yard, but they were not approved. An amended plan is now under consideration.

ELEANOR STREET.—“ No doors provided to closets for females.” A letter was sent requiring one additional sanitary convenience for females, and the conversion of the existing ones to

fresh-water closets of modern type. The work is in the hands of the contractor, but it has not yet been commenced.

BRIGHT STREET.—“Sanitary conveniences in an unsatisfactory condition.” Additional sanitary conveniences have been provided, but the whole of the work is not yet complete.

GATE STREET.—“The sanitary conveniences are not screened, and there is no intervening ventilated space provided.” The outstanding portion of the work has been completed, viz., two troughs converted to modern water-closets.

HARLEY STREET.—“Nuisance caused by the burning of offensive debris.” The nuisance has been abated, but the full requirements of the notice have not been complied with.

GREAVES STREET.—“Offensive smell in workroom.” The defective drains, from which the smell arose, have been re-laid, and are now completed.

ACCRINGTON ROAD.—“Sanitary conveniences without water supply.” The necessary repairs were done within the specified time.

NOTIFICATIONS FROM H. M. INSPECTORS OF FACTORIES WITH RESPECT TO WORKSHOPS.

TOWN HALL STREET.—“The skirt-room, on upper floor of this workshop, in which dressmaking is carried on, does not appear to be sufficiently ventilated. Analysis of a sample of air collected at 11-16 a.m., on the 27th February last, gave 13.9 volumes of carbonic acid present in 10,000 volumes of air.” A letter was sent, and the windows were made to open, and additional ventilation was provided.

KING WILLIAM STREET.—“The No. 1 room on first floor of this workshop does not appear to be sufficiently ventilated.

Analysis of a sample of air collected at 10-30 a.m., on the 19th instant, gave 17.1 volumes of carbonic acid present in 10,000 volumes of air." A letter was sent, and the existing means of ventilation were more fully utilised.

BARLEY LANE.—"Sanitary convenience is apparently unsatisfactory, being common to several occupiers, and in yard open to the public." The present conditions have been in existence many years, but on notice being sent, a lock was provided to the door, to exclude the public.

NORTHGATE.—"Limewashing apparently overdue; last entry in Register, May, 1911." Bakehouse limewashed on receipt of notice.

CHAPEL STREET.—"There is a large accumulation of dust and dirt in adjoining yard or passage leading to workshop." Notice was sent, and the accumulation was removed forthwith.

REGENT STREET.—"Walls of workshop to be limewashed." Workshop limewashed on receipt of notice.

LORD STREET WEST.—"All three rooms require cleansing." They were all limewashed on receipt of notice.

LORD STREET WEST.—"Workrooms require limewashing." A notice was sent, and the rooms were limewashed.

CARDWELL PLACE.—"W.C. communicating directly with workshop." A notice was sent, and an intervening ventilated space was provided between the W.C. and the workshop.

DARWEN STREET.—"Ceiling of bakehouse requires limewashing." A preliminary notice was sent, and the bakehouse was limewashed at once.

NORTHGATE.—"Both rooms require limewashing." A notice was sent, and both rooms were limewashed.

KING WILLIAM STREET.—“Workshop requires limewashing.”
A notice was sent, and the workshop was limewashed after some delay.

CHURCH STREET.—“Ceiling in men’s W.C. in a dangerous condition (structurally).” A notice was sent, and the defects were remedied.

CHURCH STREET.—“Workshop requires limewashing.” The workrooms were limewashed, on the receipt of a notice.

PARK ROAD.—“Workshop requires limewashing.” The workshop was limewashed, on the receipt of a notice.

PARK ROAD.—“Two sides of bakehouse papered ; bakehouse requires limewashing.” Notice was sent for the walls to be scraped and the bakehouse limewashed. This was completed at once.

KING STREET.—“Workshop requires limewashing.” The limewashing was completed on receipt of notice.

ADELAIDE STREET.—“Part of workshop requires limewashing.” The limewashing was completed after the visit of H.M. Inspector. No notice sent.

MONTAGUE STREET.—“Workshop requires limewashing.” The work was completed on receipt of notice.

MONTAGUE STREET.—“Workshop requires limewashing.” Notice was sent, but the occupier has left the country.

QUEEN’S PARK ROAD.—“Bakehouse requires limewashing.” Notice was sent, and the necessary work was carried out.

WEIR STREET.—“Workshop in a very dirty condition ; water-closet for women communicating directly with workshop.” The workshop was limewashed and cleansed, and an inter-

vening space provided between the water-closet and work-room. on receipt of notice, but the aforementioned space still requires to be ventilated. This work is now in hand.

FURTHERGATE.—“Closet requires limewashing.” Limewashed on receipt of notice.

CHURCH STREET.—“Walls and ceilings of both workrooms require limewashing.” The two rooms were limewashed on receipt of notice.

DARWEN STREET.—“Walls and ceiling require cleansing.” A notice was sent, and the workroom was cleansed.

PENNY STREET.—“Premises in a dirty and dilapidated condition.” A notice was sent, but the work has not yet been completed.

TONTINE STREET.—“Water-closet flush not in working order.” The flushing cistern was repaired on receipt of notice.

PRESTON NEW ROAD.—“Workshop requires cleansing (walls and floor).” A notice was sent, but the workroom was taken over by the adjoining tenant, who altered and cleansed it.

PRESTON NEW ROAD.—“Plain woodwork to be painted, varnished, or limewashed.” The woodwork had been painted before Inspector visited these premises.

BOLTON ROAD.—“Workshop requires limewashing.” The workshop was limewashed on receipt of notice.

BANK TOP.—“Walls of workshop require cleansing.” The painted walls were washed on receipt of notice.

FLEMING SQUARE.—“Water-closet communicating directly with workshop.” A notice was not sent, as the occupier had already made arrangements to remove to more suitable premises.

GRANVILLE ROAD.—“ Walls of workshop appear to require lime-washing.” The workshop walls were limewashed on receipt of notice.

ASTLEY GATE.—“ There is no provision in workshop for the local removal of the fumes arising from the gas-iron used for heating pressing-irons.” Suitable arrangements were made, on receipt of notice, whereby the fumes were conveyed to the outside by the flue.

LUNE STREET.—“ No door on closet.” A door was provided on receipt of notice.

LORD STREET.—“ Workroom appears to require limewashing.” A notice was sent, and the room was cleansed.

REDLAM.—“ Walls appear to require limewashing.” This was carried out on receipt of notice.

MARKHAM STREET.—“ Walls damp, due to defective roof. Walls require cleansing.” The roof was made watertight, and the walls limewashed, on receipt of notice.

HARWOOD STREET.—“ Workshop appears to require limewashing.” Notice not required ; found work carried out.

LARKHILL.—“ Walls appear to require limewashing.” A notice was sent, and the walls were limewashed.

WHALLEY RANGE.—“ Walls and ceiling of tailoring room appear to require cleansing.” The work was completed on receipt of a notice.

RAILWAY ROAD.—“ Workrooms appear to require limewashing.” Three workrooms were limewashed on receipt of notice.

KING STREET.—“ Workroom insufficiently ventilated. Walls in a dirty condition.” The workroom walls and ceiling were

papered, and the existing means of ventilation more fully utilised, on receipt of notice.

KING STREET.—“ Workrooms appear to require limewashing.” Three workrooms were limewashed, and the water-supply pipe to the W.C. repaired, on receipt of notice.

RAILWAY ROAD.—“ Water-closet communicating directly with workroom (top).” A notice was sent, and satisfactory arrangements have been made for the work to proceed at an early date.

TONTINE STREET.—“ Gas-iron heater not ventilated; men’s W.C. communicating directly with workroom.” An intervening ventilated space was provided for the men’s W.C., and a hood, with a flue attached, was fixed for the iron heater, on receipt of notice.

ST. ANDREW STREET.—“ Bakehouse appears to require limewashing.” A notice was not required, as arrangements had already been made for the bakehouse to be limewashed.

EANAM.—“ Water-closet communicating directly with workshop.” A notice was sent, but the work has not yet been started.

MILL LANE.—“ Water-closet appears to be insufficiently ventilated and lighted.” Additional means of ventilation and lighting were provided on receipt of notice.

COPY NOOK.—“ Limewashing overdue; top of bakehouse does not appear to have ever been painted, varnished, or limewashed.” A notice was not required, as the work was already in hand.

OLD CHAPEL STREET.—“ Water-closet appears to require cleansing.” It was cleansed on receipt of notice.

COPY NOOK.—“ Bakehouse appears to require limewashing.” A notice had already been issued, and the work was in hand.

CLAYTON STREET.—“ Workroom in a very dirty condition.” The workroom and staircase were cleansed on receipt of notice.

CHAPEL STREET.—“ The premises are in an apparently dangerous condition structurally.” A notice was sent, but the work has not yet been started.

ST. PETER STREET.—“ Workshop appears to require cleansing ; water-closet communicating directly with workshop.” The workshop was limewashed on receipt of notice.

CHAPEL STREET.—“ Both W.C.’s in a dirty condition.” Many notices have been issued for these W.C.’s to be put into a proper condition, but they are not used.

BOLTON ROAD.—“ Walls of mixing-room papered.” A notice was sent, and the use of the mixing-room was discontinued.

DUCKWORTH STREET.—“ Bakehouse requires limewashing.” The limewashing was completed before my Inspector visited.

DUCKWORTH STREET.—“ Floor of workshop very dirty.” A notice was sent, and an improvement has been made.

HIGHER AUDLEY STREET.—“ Ventilation insufficient.” No notice was sent, as the ventilation is ample, in my opinion.

VICTORIA STREET.—“ Walls and ceiling of front workroom require cleansing.” The limewashing and papering of two workrooms had been carried out before my Inspector visited.

PENNY STREET.—“ Water-closet in a dirty condition.” A notice was sent for this and many other matters to receive attention, but nothing has been done up to the present. These will, however, receive further attention.

HIGHER EANAM.—“ Bakehouse appears to require limewashing.” The limewashing was completed on receipt of notice.

AUDLEY RANGE.—“ Walls of bakehouse papered.” A notice was sent, and the walls were scraped and limewashed.

KING WILLIAM STREET.—“ Gas-iron heater not ventilated.” A notice was sent, but the cover has not yet been provided. This work is in hand.

WHALLEY RANGE.—“ Walls and ceiling of mixing-room papered.” A notice was sent, but the time allowed has not yet expired.

UNDERGROUND ROOMS.

There are 43 underground workrooms in the Borough, including those used by bakers, retail bakers, etc., as compared with 42 in 1911.

BAKEHOUSES.

There are 173 names on the Workshop Register as bakers, which include wholesale bakers, retail bakers, domestic retail bakers, and sugar boilers.

They occupy 190 rooms, of which seven are underground.

102 males and 283 females are employed in the baking industry of this town.

In 16 bakehouses both sexes are employed, showing a decrease of five as compared with 1911.

36 notices have been issued with regard to insanitary conditions and defects.

UNDERGROUND BAKEHOUSES.

There were 21 underground bakehouses in the Borough at the end of 1903, which, under Section 101 of the Factory and

Workshop Act, 1901, were reduced to 12 in 1904, and which were further reduced to 6, consisting of eight rooms at the end of 1906. No change has been made since that time, as they were made satisfactory to the Sanitary Authority. During the year 1912, two certificates were granted, both of which could have been obtained previously by the occupiers when the bakehouses were passed as being satisfactory.

One of the above underground bakehouses is at present unoccupied, which contains one room.

In use at the end of 1903	21
Closed during 1904	9
„ „ 1905	5
„ „ 1906	1
„ „ 1907	0
„ „ 1908	0
„ „ 1909	0
„ „ 1910	0
Untenanted at the end of 1911	1
	— 16
	—
In use at the end of 1912	5

LIGHTING OF WORKSHOPS.

The lighting of 578 workrooms is over 1-70th of the total cubic space.

WORKPLACES.

The term “Workplace” is not defined in the Act, but it includes any place where work is done permanently, and where people assemble together to do work permanently of some kind or other.

It also includes places where two or more persons meet regularly to perform some work, such work not being in the making, altering, repairing, ornamenting, finishing, or adapting for sale of any article.

In connection with these places, 298 visits have been made for the purpose of seeing that the provisions of the Factory and Workshop Act had been complied with, and six notices were sent recommending the following 12 defects to be remedied :—

- 2 Yard surfaces in bad repair.
- 2 Drains blocked.
- 1 Accumulation of refuse.
- 1 Defective soil-pipe.
- 2 General repairs.
- 1 Closet in want of repair.
- 3 Defective flushing apparatus.

—

12

FOOD-PREPARING PLACES.

Under this heading are included all pork butchers' shops and other places (not including workshops) in which meat pies, black-puddings, sausages, potted meats, tongues, etc., are prepared for human consumption.

During the year 195 visits have been paid to these places, as compared with 234 in 1911.

RESTAURANTS.

The kitchens of restaurants, hotels, and dining-rooms are included under the heading of "Workplaces," which is a term used in the Factory and Workshop Act, 1901.

The power to inspect these places is given in the Public Health Act (Sections 2 and 47), and in the Factory and Workshop Act (Section 2).

The inspection of these places has been included in the visits to the food-preparing places.

THE RECORD OF OUTWORKERS.

During the year 1912, I received 40 lists of outworkers twice during the year, and 21 lists were sent in on one occasion.

77 visits were paid to outworkers' premises, and no defects were found.

MARINE STORE DEALERS.

I have reported fully on this matter in previous reports.

I would again bring before your notice the opinion that it would be a great advantage if all marine store dealers were subject to registration, and if bye-laws were made for regulating the duration of the licence.

Insanitary conditions on their premises could then be dealt with more effectually.

During the year it was necessary to send notices to marine store dealers with respect to the following defects :—

- 1 Remove debris.
- 5 Repair sanitary conveniences.
- 1 Cleanse stables.
- 2 Limewash workrooms.
- 3 Limewash sanitary conveniences.

It is very desirable that all marine stores should be subject to Section 112 of the Public Health Act, *i.e.*, that before a person can open a marine store he must obtain the written consent of the Council, upon the recommendation of the Medical Officer of Health, such as applies to offensive trades.

OFFENSIVE TRADES.

There are 19 establishments in the Borough in which offensive trades are carried on.

TABLE XLIV.

1912 —NUISANCES REMEDIED.

	Factories	Workplaces	Out Workers and Contractors	Tailors	Dressmakers	Milliners	Cloggers	Bootmakers	Curriers and Saddlers.	Cabinet Makers and Carvers	Joiners and Masons	Bakers, Confectioners and Sugar Boilers	Basket Makers	Black and White Smiths	Blind and Chair Makers	Brushmakers	Chemists and Photographers	Coopers and Coach-builders	Cotton Waste Sorters and Upholsterers	Scale Makers and Cycle Makers	Hosiery, Underclothing and Shirtmakers	Polishers and Picture Framers	Painters and Plumbers	Printers and Paper Bag Makers	Wireworkers and Tinners.	Wheelwrights	Offensive Trades and Marine Stores	Food Preparers	Miscellaneous	TOTALS
Stoves Connected to Outer Air.....				3								1																	4	
No. of Rooms Ventilated				3		1						1																	5	
Internal Walls and Ceilings of Rooms Limewashed				18	2		7	4	1	4	1	31	1			2			1		2	5	1	1	2		2	1	3	89
Internal Floors, Windows and Walls of Rooms Cleansed				2				1																				2		5
Inside Floors and Yards Badly Flagged or Paved, Repaired	1	2		3		1						5																1		13
Defective Drains (re-laid)	8					1							2																	11
Choked Drains (opened and cleansed)	1	2		1		1																			1					6
Defective Easing Troughs and Downspouts, Repaired		2										1													1					4
Defective Sink Waste Pipes (short)												1																		1
Defective Trap Gullies and Dish Stones Replaced	6					2						2																		10
Accumulations of Refuse and other Debris Removed		1										1															1			3
Ash Receptacles and Excreta Pails Emptied .....																														...
Ash Receptacles Provided												2																		2
Defective Soil Pipes and Urinals Repaired ..		1				1						1						1												4
General Repairs not Detailed.....	10	2		1	1	1		1						1			1													18
Defective W.C.'s Repaired, Re-placed, or Reconstructed.....	14			6		1																					1		1	23
Water Closets Lighted and Ventilated	1			2																					2					5
Defective Connections and Fittings W.C. Flush Pipe to Pan, Repaired	14	3		2			1			1					1									1						23
Closets Cleansed, Pans Cleansed, Walls and Tops Limewashed	15			8				1			1			1											2		2			30
Additional W.C.'s Provided	5																										1			6
Separate Sanitary Accommodation Provided for the Sexes	1																										1			2
Overcrowding Abated .....																														...
Illegal Occupation of Underground Bakehouses Rectified .....																														...
No. of Defects Found, 263 ; Remedied, 217 + 47	76	13	...	49	3	9	8	7	1	5	2	46	3	2	1	2	1	1	1	...	2	5	1	2	8	...	8	4	4	264

Permission was granted for the establishment of a fat-melting business, and certain apparatus was obtained by the occupier. The conditions, however, have not yet been made satisfactory, but I trust that they will be improved at an early date.

The following is a list of the offensive trades :—

Tripe dressers	8
Fat melters	6
Gut scrapers	2
Bone boiler	1
Knackers	2

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The following notices were issued to the aforementioned establishments :—

1—Limewash walls, etc.

1—Remove accumulation of hoofs, etc.

TABLE XLV.—SUMMARY OF VISITS DURING 1912.

	January	February	March	April	May	June	July	August	September	October	November	December	Total
Factories..... ..	25	34	11	28	47	47	15	15	21	39	24	28	334
Workshops	12	188	110	187	169	197	155	96	218	136	140	148	1756
Workplaces	8	35	24	25	20	55	63	6	23	25	2	12	298
Outworkers .....	...	33	25	...	1	...	...	...	18	...	...	...	77
Offensive Trades	5	13	3	13	21	12	6	9	9	8	12	11	122
Complaints—Nuisances Investigated..... ..	...	3	7	5	6	9	27	9	8	14	12	4	104
Food-preparing and Storing Places.....	6	21	5	22	30	25	6	11	15	28	9	17	195
Work in Progress.....	24	26	18	22	24	18	19	15	25	45	26	37	299
Drains Tested	11	4	7	1	4	1	4	1	5	7	4	2	51
Total	91	357	210	303	322	364	295	162	342	302	229	259	3236

Table XLVI.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Particulars of Registers and Nuisances Found.	Factories.	Workplaces.	Outw'ks & C'tracs	Tailors.	Dressmakers.	Milliners.	Cloggers.	Bootmakers.	Curriers & Saddlers	Cabinet Makers and Carvers	Joiners & Masons	Bakers, Confectioners, and Sugar Boilers.	Basketmakers.	Black & White Smiths	Blind and Chairmakers	Brushmakers	Chemists and Photographers	Coopers and Coachbuilders	CottonWasteSorters and Upholsterers	Scale Makers and Cycle Makers	Hosiery, Under-clothing, Shirtmakers	Polishers and Picture Framers.	Painters & Plumbers	Printers and Paper Bag Makers	Winew'ks & Timmers	Wheelwrights	Offensive Trades and Marine Stores	Food Preparers	Miscellaneous	Total.	
No. of Workshops on Register	..	..	..	80	102	49	70	69	13	19	28	173	8	21	4	11	9	5	9	5	5	26	10	38	4	19	6	21	8	34	841
No. of Rooms .....	..	..	..	113	125	51	83	71	17	27	29	190	9	28	4	19	17	5	15	5	5	28	13	43	5	23	7	34	15	45	1021
No. of Underground Rooms .....	..	..	..	2	..	1	9	9	..	..	1	7	1	1	1	..	..	1	..	..	..	..	6	..	1	..	..	..	1	2	43
Avg No. of Males employed	..	..	..	328	1	..	156	143	38	63	78	102	27	93	8	53	17	14	28	10	10	4	33	82	1	77	25	63	13	67	1524
Avg. No. of Females employed	..	..	..	126	367	163	..	2	..	..	..	283	9	..	1	1	8	..	5	5	100	..	16	1	1	..	18	7	48	1154	
No. employing both sexes	..	..	..	49	1	..	..	2	..	..	..	16	..	..	..	1	5	..	1	1	..	2	..	..	1	..	..	6	1	7	92
No. of rooms badly lighted	..	..	..	43	63	23	17	21	8	15	10	73	6	14	2	9	7	2	8	1	1	17	7	16	3	14	5	25	9	25	443
No. of stoves without outlets	..	..	..	3	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
No. of rooms badly ventilated	..	..	..	2	1	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
No. requiring lime-washing or cleansing	..	..	..	16	2	..	7	4	1	4	2	30	1	..	..	2	..	..	1	1	2	5	1	1	1	2	..	4	1	3	89
No. of dirty floors or windows	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	3
No. of yards and floor surfaces in bad repair	2	2	..	..	..	..	..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
No. of drains defective	3	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1	1	13
No. of Drains blocked	1	2	..	1	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5
No. of insufficient downspouts and defective drainage	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7
No. of defective slop pipes	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
No. of defective gullies & dish stones.	4	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
No. of gullies and drains inside places	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
No. of accumulations of refuse	1	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4

Table XLVI.—continued.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
No. ash receptacles and excreta pails to be emptied .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. without ash receptacles ..	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2
No. of low chimneys .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of defective soil pipes & urinals..	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	5
No. of general repairs	18	2	...	2	...	...	...	1	...	...	1	...	...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	27
No. of closets to be replaced and in want of repair	11	1	...	6	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	4	...	1	...	25
No. of closets badly lighted or ventilated	1	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	...	...	...	7
No. of defective flushing apparatus..	4	3	...	2	...	...	1	...	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	14
No. of closets cleansed & limewashed	21	...	...	4	...	...	...	1	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	2	...	3	...	...	...	33
No. insufficient closet accommodation	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
No. of san. accom. for sexes not separated	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
No. of rooms overcrowded ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of floors insufficiently drained..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Illegal occupation of underground bakehouse.....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Failure to affix Abstract.....	...	...	...	...	1	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of Water Closets .....	...	...	...	107	86	41	47	53	9	15	19	129	10	16	4	10	11	3	10	5	21	7	29	5	16	3	20	5	33	714
No. of Pail Closets ..	...	...	...	8	19	9	21	16	3	4	7	46	7	...	...	1	...	2	1	...	6	3	9	...	3	4	4	3	5	181
No. of Privies .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No. of Notifications received from H.M. Inspector	16	...	...	16	4	1	6	5	...	2	3	13	...	...	...	...	...	...	1	...	3	2	1	2	2	...	4	...	1	82
Notifications sent to H.M. Inspector	1	...	...	...	1	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6
No. of notices issued	21	6	...	25	3	3	6	6	1	3	3	36	2	4	1	1	1	1	1	...	3	3	1	2	7	...	8	3	3	154
Total	111	18	...	936	776	344	423	404	90	153	183	1116	75	189	26	108	76	34	80	26	213	85	220	41	170	50	218	71	276	6518

TABLE XLVII.

Copy of Table sent to the Home Office at the request of the Secretary of State.

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR
1912 for the County Borough of Blackburn.

Factories, Workshops, Workplaces, and Homework.

1.—Inspection.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions
Factories (including Factory Laundries) ...	334	21	...
Workshops (including Workshop Laundries) ...	1756	127	...
Workplaces (other than Outworkers' Premises included in Part 3 of this Table)	298	6	...
Total	2388	154	...

2.—Defects Found.

Particulars.	No. of defects.			No. of Prosec'tns
	Found	Remedied	R'ferred to H.M. Inspector	
<i>Nuisances under the Public Health Acts—</i>				
Want of cleanliness	75	76	...	...
Want of ventilation	9	9	...	...
Overcrowding... ..	...	...	...	...
Want of drainage of floors	1	0	...	...
Other nuisances	57	59	...	...
Sanitary accommodation { insufficient	6	6	...	...
{ unsuitable or defective ..	79	81	...	...
{ not separate for sexes ...	1	2	...	...
<i>Offences under the Factory and Workshop Act—</i>				
Illegal occupation of underground bakehouse... (S. 101) ... ..	...	...	...	...
Breach of special sanitary requirements for bakehouses (SS. 97 to 100)	30	31	...	..
Other offences: Sec. 133 (Excluding offences relating to outwork which are included in Part 3 of this Table)... ..	5	...	5	...
Outstanding defects remedied ... ..	...	47	...	...
Total	263	217	5	...

TABLE XLVII.—*continued.*
3.—HOME WORK.

OUTWORKERS' LISTS, SECTION 107.									
NATURE OF WORK.	Lists received from Employers.						Notices served on Occupiers as to keeping or sending lists.	Prosecutions.	
	Twice in the year.			Once in the year.				Failing to keep or permit inspection of lists.	Failing to send lists.
	Outworkers.		Lists.	Outworkers.		Workmen.			
	Lists.	Con-tractors		Con-tractors	Workmen.				
(1)	2	3	4	5	6	7	8	9	10
Wearing Apparel—	40	62	70	21	37	14	...	...	...
(1) making, &c.....	...	...	...	...	...	...	...	...	...
(2) cleaning and washing									
Total	40	62	70	21	37	14	...	...	...

TABLE XLVII.—*continued.*

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.....		Number.
Important classes of workshops, such as work shop bake-houses, may be enumerated here.	Workshops	668
	Workshop Bakehouses.. .. .	89
	Domestic Retail Bake-houses	84
	Total number of Workshops on Register	841

5. - OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133)	5
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory & Workshop Act (s. 5))	82
Notified by H.M. Inspector	
Reports (of action taken) sent to H.M. Inspector)	...
Other	1
Underground Bakehouses (s. 101) :—	
Certificates granted during the year	2
In use at the end of the year	5

RAG FLOCK ACT, 1911.

An Act to prohibit the sale and use for the purpose of the manufacture of certain articles of unclean Flock manufactured from Rags.

Be it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :—

1.—(1) It shall not be lawful for any person to sell or have in his possession for sale flock manufactured from rags or to use for the purpose of making any article of upholstery, cushions, or bedding flock manufactured from rags, or to have in his possession flock manufactured from rags intended to be used for any such purpose, unless the flock conforms to such standard of cleanliness as may be prescribed by regulations to be made by the Local Government Board, and, if any person sells or uses or has in his possession flock in contravention of this Act, he shall be liable on summary conviction to a fine not exceeding, in the case of a first offence, ten pounds, or in the case of a second or subsequent offence, fifty pounds.

(2) All regulations made by the Local Government Board under this Act shall be laid before Parliament as soon as may be after they are made, and the Rules Publication Act, 1893, shall apply to such regulations as if they were statutory rules within the meaning of section one of that Act.

(3) Where, in any proceedings against a person charged with an offence under this Act, it is proved that an offence under this Act has been committed, but that the person charged with the offence—

(a) purchased the flock in respect of which the offence was committed from a person resident within the United Kingdom who sold the flock under a warranty that it complied with the prescribed standard of cleanliness ; and

- (b) took reasonable steps to ascertain, and did in fact believe in, the accuracy of the statement contained in the warranty ;

the person so charged shall be entitled upon an information duly laid by him to have the person who gave the warranty brought before the court, and that person may be summarily convicted of the offence, and the person originally charged shall be exempt from any fine, and the person so convicted shall, in the discretion of the court, also be liable to pay any costs incidental to the proceedings.

(4) Where a person is charged with having flock in his possession in contravention of this Act, any flock proved in the proceedings to have been found in his possession shall be deemed to be intended for sale or for use in the manufacture of such articles as aforesaid, unless the contrary is proved.

(5) It shall be the duty of a sanitary authority to enforce the provisions of this Act within their district, and for that purpose the medical officer of health, the inspector of nuisances or sanitary inspector, or any other officer whom the sanitary authority may appoint, shall have power, if so authorised by the sanitary authority, to institute and carry on any proceedings which the sanitary authority is authorised to institute and carry on under this Act, and to enter at all reasonable times any premises in which he has reasonable cause to believe that an offence under this Act is being committed, and to examine and take samples for the purposes of analysis of any flock found therein :

Provided that, where a sample is so taken, the occupier of the premises may require the officer taking the sample to divide it into two parts, and to mark, seal, and deliver to him one part.

If any person wilfully obstructs any such officer in the execution of his powers under this section, he shall be liable on summary conviction to a fine not exceeding five pounds.

(6) The expenses of sanitary authorities under this Act shall be defrayed—

- (a) in the case of the mayor, aldermen and commons of the city of London in common council assembled, out of the general rate ;
- (b) in the case of the council of a metropolitan borough, as part of the expenses incurred by the council in the execution of the Public Health (London) Act, 1891 ;
- (c) in the case of any other sanitary authority, namely the council of a municipal borough or urban or rural district, as part of the general expenses incurred in the execution of the Public Health Acts.

(7) All fines imposed in any proceedings instituted by a sanitary authority in pursuance of their powers and duties under this Act shall be paid to the sanitary authority and carried to the credit of the fund out of which the expenses incurred by the authority under this Act are defrayed.

(8) This Act shall apply to Scotland with the following modifications :—

- (a) The expression “ Local Government Board ” means the Local Government Board for Scotland ; the expression “ sanitary authority ” means the local authority under the Public Health (Scotland) Act, 1897 ; and the expression “ inspector of nuisances ” means sanitary inspector :
- (b) The provision respecting the Rules Publication Act, 1893, shall have effect as if section one of that Act applied to Scotland with the substitution of the “ Edinburgh Gazette ” for the “ London Gazette ” :

- (c) The expenses of a local authority under this Act shall be defrayed out of the public health general assessment levied under the Public Health (Scotland) Act, 1897.

(9) This Act shall apply to Ireland with the following modifications :—

- (a) The Local Government Board for Ireland shall be substituted for the Local Government Board ;
- (b) The Public Health (Ireland) Acts, 1878 to 1907, shall be substituted for the Public Health Acts ; and
- (c) The expression “ medical officer of health ” shall include a medical superintendent officer of health.

2. This Act may be cited as the Rag Flock Act, 1911, and shall come into operation on the first day of July nineteen hundred and twelve.

COTTON OPERATIVES' MORTALITY STATISTICS.

During the year I have obtained from the Registrar-General detailed information relating to the occupation of persons who were enumerated in the Census Returns for the County Borough of Blackburn in 1911.

The particulars were received in two portions, namely, those persons actually working at the date of the Census, and "retired persons."

I have tabulated these particulars, so far as they relate to the cotton industry, as follows:—

Table XLVIII.—Showing Male and Female Weavers at 1911 Census, in age-periods.

Table XLIX.—Showing Male and Female Weavers at 1901 and 1911 Census respectively, in age-periods.

Table L.—Showing Weavers, Spinners, Winders and Warpers, Cardroom-hands, and Population of Borough at 1911 Census, in age-periods.

Table LI.—Showing Weavers, Spinners, Winders and Warpers, Cardroom-hands, and Population of Borough, in age-periods, at 1901 and 1911 Census respectively.

Table LII.—Showing Cotton Operatives in Blackburn at 1911 Census, and also showing the total number employed in different branches of the industry, in age-periods.

Table LIII.—Showing Retired Cotton Operatives at 1911 Census, in age-periods.

Table LIV.—Showing Condition of Retired Operatives at 1911 Census.

Table LV.—Showing General Trades Census of Blackburn in 1911, in age-periods and separate "Trades."

Table LVI.—Showing “ Retired Persons ” in Blackburn in 1911, according to trade and age-periods.

From the foregoing Tables it will be seen that I have extracted all the main particulars relating to the occupation of the population of Blackburn, including particulars as to marriage, etc., and age-periods.

It will be observed that the number of Weavers, Winders and Warpers, and Spinners occupied have increased as compared with the 1901 Census Returns, and that the numbers of Card-room-hands have decreased.

The figures for the whole Borough have been taken from the Trade Census Returns, as this is the only source from which I can obtain such information at the present time, because the Registrar-General's Report relating to age-periods has not yet been issued.

TABLE XLVIII.

Population of Male and Female Weavers at the 1911 Census
(including the Retired Weavers).

Age Periods	Males	Females
15-25	3137	7137
25-35	2255	5091
35-45	1651	2790
45-55	1056	1200
55-65	554	343
65 and upwards	308	146
Total	8961	16707

TABLE XLIX.

Table showing Male and Female Weavers (including Retired Weavers) at the 1901 Census and at the 1911 Census respectively.

Male Weavers			Female Weavers	
Age Period	1901 Census	1911 Census	1901 Census	1911 Census
15-25	2900	3137	7313	7137
25-35	1832	2255	4370	5091
35-45	1266	1651	2128	2790
45-55	708	1056	710	1200
55-65	434	554	219	343
65 and upwards	184	308	100	146
Total 	7324	8961	14840	16707

TABLE L.

Populations at 1911 Census, including retired operatives.

Age Periods	Weavers	Spinners	Winders and Warpers	Card- room hands	Borough*
15-25	10274	1056	2049	529	25286
25-35	7346	502	1837	448	23881
35-45	4441	338	1247	295	18749
45-55	2256	410	810	272	14492
55-65	897	202	371	86	8705
65 & Upwards	454	105	118	45	5412
Total	25668	2613	6432	1675	96525

* Taken from Trade Census Returns.

TABLE LII—TRADE CENSUS, 1911.—Table showing Cotton Operatives in Blackburn at Census, 1911 (not including Retired Operatives).

OCCUPATION	10 to 15					15 to 20					20 to 25					25 to 35					35 to 45					45 to 55					55 to 65					65 and upwards					Totals				
	Males		Females			Males		Females			Males		Females			Males		Females			Males		Females			Males		Females			Males		Females			Males.		Females							
	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed					
Weaving	1214	...	1820	1782	7	3544	35	...	1108	240	2781	772	5	705	1549	1950	3688	50	258	1390	691	1944	147	161	886	321	657	204	114	376	81	133	89	62	86	14	27	21	5404	4534	11202	6656	516
Winding, Warping, etc., Processes	186	...	172	205	1	681	5	...	168	39	685	171	1	107	241	774	692	21	45	258	369	504	70	28	252	182	258	84	36	90	69	82	71	4	15	19	14	16	869	896	2951	1726	263
Spinning Processes	83	...	93	225	...	343	7	...	157	49	163	110	1	83	182	64	165	8	43	191	16	78	9	71	300	8	20	7	48	124	1	...	2	14	35	724	881	688	380	27
Cardroom Hands, etc.—(a) Strippers and Grinders	5	4	4	6	33	6	38	23	2	8	3	23	109
(b) Others	14	...	55	54	...	187	1	...	37	16	144	77	...	15	40	96	249	8	12	40	31	157	11	3	34	33	133	42	3	22	8	24	14	2	4	1	4	6	140	156	555	645	81
Workers in Other Processes (Cotton)	228	...	2	269	...	15	131	36	8	1	...	64	129	5	3	...	11	125	2	2	...	13	86	2	2	...	7	32	1	...	1	2	6	725	414	35	8	1
Cotton Workers (Undefined)	41	...	45	86	1	20	94	19	4	76	127	6	4	...	26	132	1	5	...	22	145	...	4	1	24	76	17	20	...	1	1	386	520	76	14	2
Total Working Cotton Operatives Enumerated at Census 1911	1766	...	2187	2716	9	4790	48	...	1699	603	3785	1131	7	1056	2301	2895	4201	87	401	2174	1110	2690	237	298	1726	546	1074	338	234	728	160	239	177	101	169	34	46	44	8271	7510	15507	9429	890
Total Persons in Borough, Census 1911	5908	...	6009	5864	22	6538	61	...	4410	1141	5669	1571	10	3561	7225	5053	7896	146	1370	7218	2162	7490	509	1096	5518	1258	5448	1172	1033	2911	561	2630	1570	1051	1151	322	909	1979	24293	25186	27572	26005	5386

TABLE LI.

Showing the number of persons employed in the different branches of the Cotton Industry at the 1901 Census and at the 1911 Census respectively.

Age Periods.	Weavers		Spinners		Winders & Warpers		Card-room Hands		Borough	
	1901	1911	1901	1911	1901	1911	1901	1911	1901	1911
15-25	10213	10274	655	1056	2442	2049	647	529	26693	25286
25-35	6202	7346	416	502	1692	1837	433	448	21451	23881
35-45	3394	4441	522	338	1075	1247	446	295	17296	18749
45-55	1418	2256	340	410	596	810	209	272	11908	14492
55-65	653	897	146	202	211	371	76	86	7197	8705
65 & upwards	284	454	84	105	93	118	42	45	4228	5412
Total ...	22164	25668	2163	2613	6109	6432	1853	1675	88773	96525

TABLE LIII.

Retired Cotton Operatives in Blackburn at 1911 Census.

Age Periods	Weavers		Spinning Processes		Winding and Warping Processes		Card-room hands, &c		Other Workers in Cotton Processes and undefined		Total Retired Cotton Operatives		Total Retired in Borough all occupations	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
15-20	...	...	...	...	1	...	...	...	...	...	1	...	1	...
20-25	...	...	...	1	...	2	...	...	...	...	...	3	2	5
25-35	1	3	..	...	1	1	...	1	2	...	4	5	12	9
35-45	3	8	1	...	...	1	...	...	...	...	4	9	23	15
45-55	9	18	4	...	3	3	1	3	5	...	22	24	99	41
55-65	64	40	26	1	10	13	3	2	15	...	118	56	381	107
65 & upwards	160	84	50	6	18	32	8	17	38	2	274	141	834	245
Totals	237	153	81	8	33	52	12	23	60	2	423	238	1352	422

TABLE LIV.

Showing the condition of Retired Cotton Operatives as enumerated at 1911 Census.

	Single		Married		Widowed		Total		Enumerated in Workhouse	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Weavers	28	29	106	33	103	91	237	153	57	47
Spinning Processes ...	11	2	39	1	31	5	81	8	28	3
Winding and Warping Processes	6	13	18	9	9	30	33	52	6	26
Cardroom hands, &c...	...	5	4	3	8	15	12	23	2	17
Other Workers in Cotton Processes and undefined	2	...	37	...	21	2	60	2	6	1
Total Retired Cotton Operatives	47	49	204	46	172	143	423	238	99	94
Total Retired in Borough all occupations	139	117	705	77	508	228	1352	422	316	161

TABLE LV.—TRADE CENSUS, 1911 (not including Retired Persons).

TRADES.	10 to 15 years.					15 to 20 years					20 to 25 years					25 to 35 years					35 to 45 years					45 to 55 years					55 to 65 years					65 years and upwards					Totals					
	Males		Females			Males		Females			Males		Females			Males		Females			Males		Females			Males		Females			Males		Fema le			Males		Females								
	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed	Single and Widowed	Married	Single	Married	Widowed						
(1) General and Local Government of the Country	19	45	...	6	37	14	22	55	109	24	3	1	7	120	11	8	1	6	73	3	4	5	2	30	...	1	1	1	5	172	360	66	16	8	
(2) Army and Navy	2	6	8	2	1	6	2		
(3) Professional Occupations and their Subordinate Services	9	...	1	83	...	61	104	17	190	6	...	140	145	276	22	3	46	190	89	29	8	32	141	46	29	11	26	76	14	15	11	9	25	3	2	2	449	594	680	103	35	
(4) Domestic Offices or Services	5	...	36	27	...	321	1	...	51	7	418	21	1	42	97	420	110	12	14	130	211	131	66	10	96	138	100	101	16	66	89	57	121	8	16	32	16	89	173	412	1665	436	390	
(5) Commercial Occupations	27	...	4	311	...	46	288	48	37	220	358	34	4	...	65	405	2	5	...	40	271	5	4	1	32	137	1	...	1	21	53	...	1	...	1004	1272	129	14	2	
(6) Conveyance of Men, Goods, and Messages	231	...	4	295	4	10	297	129	13	285	685	8	117	674	1	2	1	87	408	...	1	3	55	204	2	22	36	...	1	1	1389	2140	36	4	7	
(7) Agriculture	8	58	...	11	58	4	9	2	...	62	53	13	1	...	22	59	5	1	2	26	46	3	1	4	25	46	...	2	6	13	26	...	1	...	272	234	41	8	12	
(8) Fishermen	
(9) In and About and Dealing in Products of Mines and Quarries	18	70	38	28	58	132	33	148	19	83	1	20	36	4	13	260	440	1	
(10) Metals, Machines, Implements and Conveyances (Foundries included) ...	124	...	12	685	4	86	537	172	55	7	...	414	990	39	27	2	89	837	15	12	2	85	599	11	12	3	78	320	6	2	4	39	60	...	1	1	2051	2982	224	61	12	
(11) Precious Metals, Jewels, Watches, Instruments, and Games	2	21	20	9	4	1	...	13	37	4	4	...	4	41	5	2	28	...	1	1	6	16	2	2	6	1	70	137	13	6	4	
(12) Building and Works of Construction	31	226	1	248	60	259	574	130	525	125	530	91	249	36	45	1	1146	1984	1	
(13) Wood Furniture, Fittings, and Decorations	17	...	5	107	...	10	89	15	7	4	...	95	161	9	4	...	16	137	2	8	1	21	124	2	11	1	27	83	1	2	2	10	20	1	2	1	382	540	37	31	5	
(14) Brick, Plaster and Cement, Pottery, and Glass	6	38	27	13	1	1	...	34	68	...	1	...	12	43	1	1	...	4	24	...	2	1	3	14	...	2	2	...	4	...	1	...	124	166	2	8	3	
(15) Oils, Soap, and Chemicals	3	28	1	8	19	10	8	1	...	23	42	3	3	...	12	44	1	6	...	7	29	1	3	24	...	1	1	2	9	1	...	97	159	20	11	3
(16) Skins, Hair, and Feathers	2	16	...	2	10	8	11	25	1	2	...	4	27	1	2	...	7	21	...	1	...	9	20	1	4	6	1	63	107	6	5	...	
(17) Paper, Prints, Books, and Stationery	20	...	20	116	...	61	1	...	85	23	40	6	...	74	148	34	11	...	32	138	10	17	1	20	89	3	14	4	13	47	...	3	2	3	11	...	1	2	363	456	168	53	9	
(18) Textile Fabrics (including Cotton)	1818	...	2200	2836	10	4856	48	...	1789	430	3850	1131	7	1129	2418	2977	4240	89	429	2275	1142	2722	245	314	1804	566	1097	346	241	754	168	252	181	104	192	34	49	47	8660	7883	15787	9539	915	
(19) Dress	39	...	133	185	1	442	1	...	171	26	448	18	1	126	231	430	138	8	50	242	155	168	18	48	179	59	63	28	28	94	18	24	24	33	41	11	7	13	680	814	1696	359	92	
(20) Food, Tobacco, Public Houses, and Lodging Houses	93	...	36	431	...	134	319	82	170	15	...	242	626	216	206	9	77	604	151	276	31	60	524	106	205	83	56	216	40	93	81	46	78	16	18	54	1324	2220	869	813	258	
(21) Gas, Water, Electricity, and Sanitary Service	3	20	5	20	67	18	100	9	69	11	59	14	16	95	316	
(22) Other General and Undefined Workers and Dealers	46	...	3	91	1	12	138	38	15	6	...	199	243	10	22	1	155	340	6	30	2	133	277	12	26	5	98	149	3	11	5	52	43	1	...	11	912	1091	71	95	24	
(23) Without Specified Occupations or Unoccupied	3399	...	3555	199	...	472	10	...	59	3	382	352	1	52	14	546	3098	21	37	34	354	4132	131	41	101	310	3877	573	193	271	220	2165	1124	628	446	223	809	1755	4590	869	6062	14443	3605	
Total	5908	...	6009	5864	22	6538	61	...	4410	1141	5669	1571	10	3561	7225	5053	7896	146	1370	7218	2162	7490	509	1096	5518	1258	5448	1172	1933	2911	561	2630	1570	1051	1151	322	909	1979	24293	25186	27572	26005	5386	

The following Tables show the death-rates amongst those persons engaged in the Cotton Industry of Blackburn for several years, 1889 to 1911, and also for the year 1912. The rates for the years 1893 to 1896 have been calculated from the 1891 Census figures. The rates for the years 1897 to 1901 have been calculated from the 1901 Census figures, including those operatives who were formerly in the cotton trade but who had retired.

The rates for the years 1902 to 1911 have been calculated from the 1901 Census figures also, but with the addition of those cotton operatives who were included with the extension of the Borough in 1901.

The compilation of these statistics year by year is proving of great value in enabling one to draw certain conclusions based upon the observations of a considerable number of years. I devoted considerable space to this section in my Annual Report for 1906.

The age-periods in these Tables represent the five decades from 15 to 65 years, and the period "65 years and upwards."

The most useful figures are those given in the various decades from 15 to 65 years, since in the age-period "65 years and upwards" the number of deaths is large, owing to the inclusion of retired cotton operatives. This affects males more than females.

All the figures have been revised and corrected since the year 1889.

In the following Tables the cotton operatives have been divided into these four groups:—

- I. Weavers.
- II. Spinners.
- III. Winders, Warpers, etc.
- IV. Cardroom-hands.

Also the deaths and death-rates have been calculated from three points of view, namely :—

- (a) Death-rates for 1912 compared with death-rates for the years 1889 to 1912.
- (b) Phthisis death-rates for 1912 compared with Phthisis death-rates for the years 1889 to 1912.
- (c) Death-rates from other Respiratory Diseases for 1912 compared with the death-rates from other Respiratory Diseases for the years 1889 to 1912.

These figures indicate an improvement in the death-rates amongst Cotton Operatives.

TABLE LVI.—TRADE CENSUS, 1911—Retired Persons.

TRADES.	15 to 20]		20 to 25		25 to 35		35 to 45		45 to 55		55 to 65		65 and upwards		Totals						Enumerated in Workhouse		
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males			Females			Males	Females	Total
															Single	Married	Widowed	Single	Married	Widowed			
(1) General and Local Government of the Country	1	...	...	...	3	...	20	...	19	1	12	...	2	45	8	...	...	1	1	...	1
(2) Army and Navy	1	...	2	...	1	...	2	...	6	...	20	...	8	16	8	...	...	...	2	...	2
(3) Professional Occupations and their Subordinate Services	2	1	13	4	16	5	4	20	7	7	...	3	2	1	3
(4) Domestic Offices or Services	1	...	3	1	3	3	17	11	44	...	10	5	26	9	33	3	52	55
(5) Commercial Occupations	1	...	1	...	6	...	17	...	...	15	10	...	...	...	5	...	5
(6) Conveyance of Men, Goods, and Messages	1	...	...	...	6	...	21	1	37	...	9	34	2	...	...	1	12	1	13
(7) Agriculture	4	...	11	...	38	5	6	21	26	...	2	3	15	...	15
(8) Fishermen
(9) In and About and Dealing in Products of Mines and Quarries	1	...	2	...	10	...	26	...	4	20	15	...	...	...	13	...	13
(10) Metals, Machines, Implements, and Conveyances (Foundries included)...	1	...	8	1	48	...	103	4	8	82	70	3	1	1	29	1	30
(11) Precious Metals, Jewels, Watches, Instruments, and Games	1	...	...	...	1	...	...	1	1	...	...	...	1	...	1
(12) Building and Works of Construction	1	...	7	...	18	...	68	...	7	46	41	...	...	...	25	...	25
(13) Wood Furniture, Fittings, and Decorations	1	...	5	...	15	1	2	13	6	...	...	1	5	...	5
(14) Brick, Plaster and Cement, Pottery and Glass	3	...	...	3	...	...	...	...	...	...	...
(15) Oils, Soap, and Chemicals	4	...	1	2	1	...	...	...	...	...	...
(16) Skins, Hair, and Feathers	1	...	3	...	...	3	1	...	...	...	2	...	2
(17) Paper, Prints, Books, and Stationery	2	...	...	...	...	...	5	1	6	...	1	7	5	1	...	...	3	...	3
(18) Textile Fabrics (Including Cotton)	1	...	...	3	4	5	4	9	27	24	121	56	287	143	48	221	175	49	46	145	101	95	196
(19) Dress	1	...	1	2	1	2	1	6	6	16	15	2	10	14	11	4	10	11	9	20
(20) Food, Tobacco, Public Houses, and Lodging Houses	1	...	1	5	1	9	7	36	18	58	13	3	74	31	15	7	19	5	1	6
(21) Gas, Water, Electricity, and Sanitary Service	3	...	6	...	...	6	3	...	...	...	1	...	1
(22) Other General and Undefined Workers and Dealers	1	...	3	...	4	...	49	...	77	2	34	46	54	1	...	1	80	1	81
(23) Without Specified Occupations or Unoccupied	2	1	1	1	2	4	...	3	10	13	...	10	5	4	8	10	...	...	...
Total	1	...	2	5	12	9	23	15	99	41	381	107	834	245	139	705	508	117	77	228	316	161	477

TABLE LVII.—DEATHS OF MALE AND FEMALE WEAVERS FOR THE YEARS 1903—1912.

Age Periods.	1903		1904		1905		1906		1907		1908		1909		1910		1911		1912	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
15 to 25	7	20	8	16	8	14	10	26	7	16	11	17	5	20	16	14	6	25	10	21
25 to 35	9	18	2	12	9	19	6	15	9	11	2	10	6	30	3	23	8	27	7	16
35 to 45	8	11	6	13	10	17	5	16	13	7	13	10	13	16	6	20	12	14	17	13
45 to 55	14	6	14	11	9	7	11	12	16	11	16	9	16	10	11	19	12	16	14	8
55 to 65	14	4	25	4	14	7	10	10	13	5	15	1	17	7	13	17	11	9	9	17
65 and upwards	21	6	19	5	30	7	34	4	26	8	26	9	31	4	32	17	24	3	22	11

TABLE LVIII.—DEATH RATES OF MALE AND FEMALE WEAVERS FOR THE YEARS 1903—1912.

Age Periods.	1903		1904		1905		1906		1907		1908		1909		1910		1911		1912	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
15 to 25...	2.4	2.7	2.7	2.1	2.7	1.9	3.4	3.5	2.4	2.1	3.7	2.3	1.7	2.7	5.5	1.9	2.0	3.4	3.1	2.9
25 to 35...	4.9	4.1	1.0	2.7	4.9	4.2	3.2	3.4	4.9	2.5	1.0	2.2	3.2	6.8	1.6	5.2	4.3	6.1	3.1	3.1
35 to 45...	6.3	5.1	4.7	6.1	7.3	7.9	3.9	7.5	10.2	3.2	10.2	4.6	10.2	7.5	4.7	9.3	9.4	6.5	10.3	4.6
45 to 55...	19.7	8.4	19.7	15.4	12.7	9.8	15.5	16.9	22.6	15.5	22.6	12.6	22.6	14.0	15.5	26.7	16.9	22.5	13.2	6.6
55 to 65...	32.2	18.2	57.6	18.2	32.2	31.9	23.0	45.6	29.9	22.8	34.5	4.5	39.1	31.9	29.9	77.6	25.3	41.1	16.2	49.5
65 & upds.	114.1	60.0	103.2	50.0	163.1	70.0	184.7	40.0	141.3	80.0	141.3	90.0	168.4	40.0	173.9	170.0	130.4	30.0	71.4	75.3

The following rates have been worked from the 1911 Census figures, including the retired operatives.

TABLE LIX.—DEATHS DURING 1912.

Age Periods.	Weavers	Spinners.	Warpers, Winders, &c.	Card Room Hands	Borough.
15 to 25.....	31	1	3	1	80
25 to 35.....	23	3	12	3	120
35 to 45.....	30	6	9	4	165
45 to 55	22	6	8	4	213
55 to 65.....	26	12	17	7	311
65 and upwards ...	33	24	10	4	506
Total	165	52	59	23	1395

TABLE LX.—DEATH RATES for 1912.

Age Periods.	Weavers.	Spinners.	Warpers, Winders, &c.	Card Room Hands	Borough.
15 to 25.....	3·0	0·9	1·4	1·9	3·1
25 to 35.....	3·1	5·9	6·5	6·7	5·0
35 to 45.....	6·7	17·7	7·2	13·5	8·8
45 to 55.....	9·7	14·6	9·8	14·7	14·7
55 to 65.....	28·9	59·4	45·8	81·4	35·7
65 and upwards ...	72·6	228·5	84·7	88·8	93·4
All Ages over 15 Years.....	6·4	19·9	9·1	13·7	14·4

TABLE LXI.—PHTHISIS, 1912.
DEATHS.

Age Periods.	Weavers.	Spinners.	Winders, Warper, &c.	Card Room Hands	Borough.
15 to 25.....	14	...	1	1	24
25 to 35.....	8	3	3	1	26
35 to 45.....	4	1	...	1	23
45 to 55.....	3	2	1	...	22
55 to 65.....	2	...	...	...	6
65 and upwards.....	...	...	...	...	...
Total.....	31	6	5	3	101

TABLE LXII.—DEATH RATES FOR 1912.

Age Periods.	Weavers.	Spinners.	Winders, Warper, &c.	Card Room Hands	Borough.
15 to 25.....	1'3	0'0	0'4	1'9	0'9
25 to 35.....	1'0	5'9	1'6	2'2	1'0
35 to 45.....	0'9	2'9	0'0	3'3	1'2
45 to 55.....	1'3	4'8	1'2	0'0	1'5
55 to 65.....	2'2	0'0	0'0	0'0	0'6
65 and upwards.....	0'0	0'0	0'0	0'0	0'0
All Ages over 15 years...	1'2	2'2	0'7	1'7	1'0

TABLE LXIII.—RESPIRATORY DISEASES OTHER
THAN PHTHISIS, 1912.

DEATHS.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Borough.
15 to 25	1	1	2	...	13
25 to 35	4	..	3	...	25
35 to 45	3	...	...	1	28
45 to 55 .. .	4	1	1	1	42
55 to 65	6	3	4	4	86
65 and upwards.....	12	8	...	1	110
Total	30	13	10	7	304

TABLE LXIV.—DEATH RATES FOR 1912.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, etc.	Card Room Hands.	Borough.
15 to 25	0.09	0.9	0.9	0.0	0.5
25 to 35	0.5	0.0	1.6	0.0	1.0
35 to 45	0.9	0.0	0.0	3.3	1.4
45 to 55	1.7	2.4	1.2	3.6	2.9
55 to 65	6.6	14.8	10.7	46.5	9.8
65 and upwards	26.4	76.1	0.0	22.2	20.3
All ages over 15 years ...	1.1	4.9	1.5	4.1	3.1

TABLE LXV.—DEATHS from all causes from
1889 to 1912.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	845	86	219	52	2539
25 to 35	643	99	234	61	3105
35 to 45.....	645	124	206	86	4415
45 to 55	509	178	193	90	5514
55 to 65.....	553	159	153	63	7035
65 & upwards.....	725	296	182	55	10427
Total	3920	942	1187	407	33035

TABLE LXVI.—AVERAGE DEATH RATES 1889 TO 1912.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	3·4	3·4	4·4	4·1	4·2
25 to 35	3·6	8·2	5·3	5·6	5·4
35 to 45.....	6·0	13·9	6·9	12·1	9·8
45 to 55.....	9·4	18·1	9·9	13·7	15·8
55 to 65	25·7	32·8	17·1	30·5	33·6
65 & upwards.....	66·5	117·4	64·2	50·9	80·2
All Ages over 15 Years	6·3	15·0	7·7	10·1	14·2

TABLE LXVII.—PHTHISIS, 1889 to 1912.
DEATHS.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	259	22	70	14	682
25 to 35.....	189	32	83	23	723
35 to 45.....	143	30	31	22	806
45 to 55.....	60	22	15	12	497
55 to 65.....	34	4	6	1	243
65 and upwards	3	2	4	0	44
Total	688	112	209	72	2995

TABLE LXVIII.—AVERAGE DEATH RATES,
1889 to 1912.

Age Periods.	Weavers.	Spinners.	Winders, Warpers, &c.	Card Room Hands	Borough.
15 to 25.....	1'0	0'8	1'4	1'1	1'1
25 to 35.....	1'0	2'6	1'9	2'1	1'2
35 to 45.....	1'3	3'7	1'0	3'1	1'7
45 to 55... ..	1'1	2'2	0'7	1'8	1'4
55 to 65	1'5	0'8	0'7	0'4	1'1
65 and upwards.....	0'2	0'8	1'4	0'0	0'3
All Ages over 15 years	1'1	1'7	1'3	1'7	0'1

TABLE LXIX.—RESPIRATORY DISEASES OTHER
THAN PHTHISIS, 1889 to 1912.
DEATHS.

Age Periods.	Weavers	Spinners	Winders, Warpers, etc.	Card Room Hands.	Borough
15 to 25.....	81	14	31	5	379
25 to 35.....	85	21	24	6	522
35 to 45	110	22	41	17	909
45 to 55	139	44	43	33	1391
55 to 65.....	185	59	44	19	2104
65 and upwards.....	178	80	41	20	2721
Total.....	778	240	224	100	8026

TABLE LXX.—AVERAGE DEATH RATES
1889 to 1912.

Age Periods.	Weavers	Spinners	Winders, Warpers, etc.	Card Room Hands	Borough
15 to 25.....	0·3	0·5	0·6	0·4	0·6
25 to 35.....	0·4	1·7	0·5	0·5	0·9
35 to 45.....	1·0	2·7	1·3	2·4	2·0
45 to 55.....	2·5	4·4	2·2	5·0	3·9
55 to 65.....	8·6	12·1	4·9	9·2	10·0
65 and upwards.....	16·3	31·7	14·4	18·7	20·9
All ages over 15 years ...	1·2	3·8	1·4	2·4	3·4

Reference to my Annual Health Report for 1906 will show that I gave a detailed comparison of the death-rates of various workers in the cotton mills of Blackburn for a complete period of fifteen years, namely, from 1891 to 1905 inclusive. The remark which I made then still applies, namely, that, as a whole, Medical Officers of Health have not availed themselves of opportunities for calculating the effect of various trades on the health of the workers in this way. Indeed, I do not know any other towns in which this opportunity is taken to the same extent as is the case with Blackburn.

It is only just I should state that this work was initiated by my predecessor in office, Dr. Wheatley.

It is now possible, since the 1911 Census results are to hand, to ascertain the mean population of the various groups of cotton operatives and of male and female weavers between the 1901 and the 1911 Census.

Now a fourth quinquennial period, namely, from 1906 to 1910, can be given, with particulars respecting average death-rates amongst male and female weavers, and the average death-rates from Phthisis and from Respiratory Diseases other than Phthisis amongst weavers.

It is thus possible to note the progressive improvement in twenty years, divided into four quinquennial periods as follows:—(a) 1891 to 1895, (b) 1896 to 1900, (c) 1901 to 1905, and (d) 1906 to 1910.

Figures for the years 1911 and 1912 also appear in this section, but it is well known that conclusions may be drawn with less risk of error by considering a period such as five years than by considering single years.

The following Tables and Charts are very interesting:—

TABLE LXXI.

POPULATIONS AT 1891 CENSUS.

Age-Period	Weavers	Spinners	Winders and Warpers	Card-room Hands	Borough
15-25	10,176	769	2,261	516	23,621
25-35	5,467	806	1,531	581	19,739
35-45	2,625	499	863	368	14,299
45-55	1,253	216	387	184	10,076
55-65	436	145	141	58	6,038
65 and upwards	125	46	46	13	3,521

MEAN POPULATIONS BETWEEN 1891 CENSUS AND 1901 CENSUS (NOT INCLUDING THE EXTENSION OF NOV., 1901), BUT INCLUDING THE RETIRED OPERATIVES TAKEN AT THE 1901 CENSUS.

Age-Period	Weavers	Spinners	Winders and Warpers	Card-room Hands	Borough
15-25	10,130	705	2,340	575	25,000
25-35	5,799	607	1,600	500	20,461
35-45	2,994	508	964	402	15,700
45-55	1,329	274	489	196	10,926
55-65	543	145	174	67	6,531
65 and upwards	204	64	69	27	3,857

POPULATIONS AT 1901 CENSUS, INCLUDING RETIRED OPERATIVES, TAKEN AT 1901 CENSUS, AND THE EXTENSION OF NOV., 1901.

Age-Period	Weavers	Spinners	Winders and Warpers	Card-room Hands	Borough
15-25	10,213	655	2,442	647	26,693
25-35	6,202	416	1,692	433	21,451
35-45	3,394	522	1,075	446	17,296
45-55	1,418	340	596	209	11,908
55-65	653	146	211	76	7,197
65 and upwards	284	84	93	42	4,228

MEAN POPULATIONS BETWEEN 1901 CENSUS AND 1911 CENSUS, INCLUDING THE RETIRED OPERATIVES.

Age-Period	Weavers	Spinners	Winders and Warpers	Card-room Hands	Borough
15-25	10,243	855	2,245	588	25,980
25-35	6,774	459	1,764	440	22,666
35-45	3,917	430	1,161	370	19,022
45-55	1,837	375	703	240	13,200
55-65	775	174	291	81	7,951
65 and upwards	369	94	105	43	4,820

TABLE LXXII.

POPULATION OF MALE AND FEMALE WEAVERS AT
THE 1891 CENSUS.

Age-Periods	Males	Females
15-25	3,472	6,704
25-35	1,669	3,798
35-45	983	1,642
45-55	617	636
55-65	272	164
65 and upwards...	101	24

MEAN POPULATION OF MALE AND FEMALE
WEAVERS BETWEEN 1891 CENSUS AND 1901
CENSUS (NOT INCLUDING EXTENSION OF NOV.,
1901), BUT INCLUDING THE RETIRED WEAVERS
TAKEN AT 1901 CENSUS.

Age-Periods	Males	Females
15-25	3,170	6,960
25-35	1,737	4,062
35-45	1,117	1,877
45-55	658	671
55-65	352	190
65 and upwards...	142	62

POPULATION OF MALE AND FEMALE WEAVERS AT
THE 1901 CENSUS (INCLUDING THE RETIRED
WEAVERS AND THE EXTENSION OF NOV., 1901).

Age-Periods	Males	Females
15-25	2,900	7,313
25-35	1,832	4,370
35-45	1,266	2,128
45-55	708	710
55-65	434	219
65 and upwards...	184	100

MEAN POPULATION OF MALE AND FEMALE
WEAVERS BETWEEN 1901 CENSUS AND 1911
CENSUS, INCLUDING THE RETIRED WEAVERS.

Age-Periods	Males	Females
15-25	3,018	7,225
25-35	2,043	4,730
35-45	1,459	2,459
45-55	882	955
55-65	494	281
65 and upwards...	246	123

TABLE LXXIII.

AVERAGE DEATH-RATES AMONGST COTTON OPERATIVES FOR THE YEARS 1891-1895.

Age-Period	Weavers	Spinners	Winders and Warpers	Card-room Hands	Average Death-Rate for whole of Borough
15-25	4.3	7.5	4.8	4.2	4.9
25-35	6.4	7.7	8.6	7.9	7.1
35-45	11.9	13.2	12.5	12.5	14.2
45-55	14.0	34.2	25.8	21.7	23.7
55-65	53.2	48.2	42.5	34.5	48.5
65 and upwards	187.2	278.2	186.9	230.7	113.5

1896-1900.

15-25	3.7	3.7	5.4	3.1	4.2
25-35	4.9	7.2	6.1	4.0	6.3
35-45	9.6	10.2	10.8	7.9	12.3
45-55	15.3	23.3	21.6	16.3	20.0
55-65	38.6	23.4	35.6	23.9	45.0
65 and upwards	155.9	193.7	139.1	37.0	107.3

1901-1905.

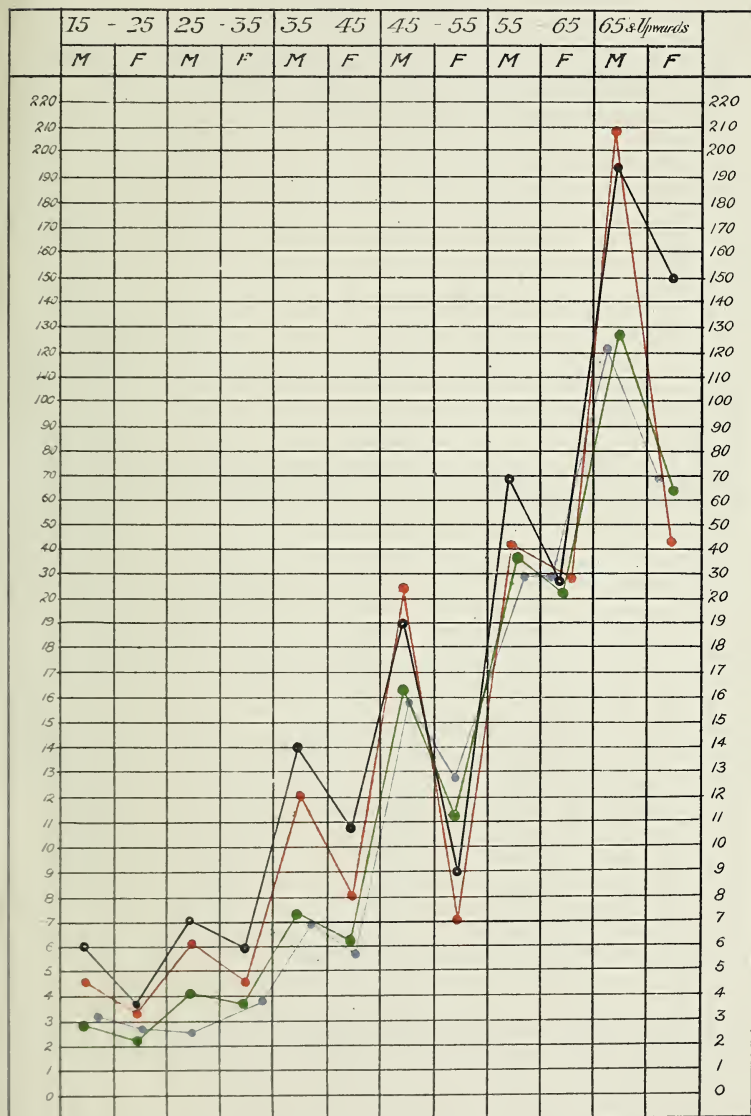
15-25	2.7	2.7	2.6	2.8	3.7
25-35	3.9	7.7	4.7	2.3	5.6
35-45	6.9	6.9	5.9	5.8	9.5
45-55	13.7	22.3	10.7	16.2	19.2
55-65	34.6	42.4	20.8	15.8	38.9
65 and upwards	106.3	121.4	55.9	19.0	100.7

1906-1910.

15-25	2.7	3.9	2.7	4.1	3.4
25-35	3.4	4.3	4.5	5.4	4.9
35-45	6.6	9.3	6.2	9.2	8.6
45-55	14.3	23.4	8.5	15.0	17.4
55-65	27.8	37.9	22.7	49.4	37.3
65 and upwards	103.5	134.0	49.5	88.3	101.5

CHART 5.

Shewing Death Rates of Male and Female Weavers from
1891—1910, in 5 year periods.



Black indicates period 1891-1895

Red indicates period 1896-1900

Green indicates period 1901 1905

Blue indicates period 1906-1910

TABLE LXXIV.

AVERAGE DEATH-RATES OF MALE AND FEMALE
WEAVERS FOR THE YEARS 1891-1895.

Age-Periods	Males	Females
15-25	6.1	3.4
25-35	7.3	6.0
35-45	14.0	10.7
45-55	19.1	9.1
55-65	69.1	26.8
65 and upwards...	196.0	150.0

1896-1900.

15-25	4.6	3.3
25-35	6.2	4.3
35-45	12.1	8.1
45-55	23.7	7.1
55-65	43.7	29.4
65 and upwards...	204.2	45.1

1901-1905.

15-25	2.9	2.5
25-35	4.2	3.8
35-45	7.4	6.5
45-55	16.1	11.2
55-65	39.6	24.6
65 and upwards...	129.3	64.0

1906-1910.

15-25	3.2	2.5
25-35	2.5	3.7
35-45	6.8	5.6
45-55	15.8	12.7
55-65	27.5	28.4
65 and upwards...	121.1	68.3

TABLE LXXV.

NUMBERS AND AVERAGE DEATH-RATES FROM
PHTHISIS AMONGST WEAVERS DURING THE
LAST FOUR QUINQUENNIAL PERIODS.

1891-1895.

Age Period	Number	Death-Rate from Phthisis.	Average Phthisis Death-Rate for the Borough
15-25	54	1.0	1.1
25-35	57	2.1	1.9
35-45	28	2.1	2.4
45-55	7	1.1	1.9
55-65	6	2.7	1.5
65 and upwards	0	0.0	0.7

1896-1900.

15-25	55	1.1	1.1
25-35	43	1.5	1.6
35-45	35	2.3	2.5
45-55	16	2.4	2.0
55-65	8	2.9	1.8
65 and upwards	2	1.9	0.6

1901-1905.

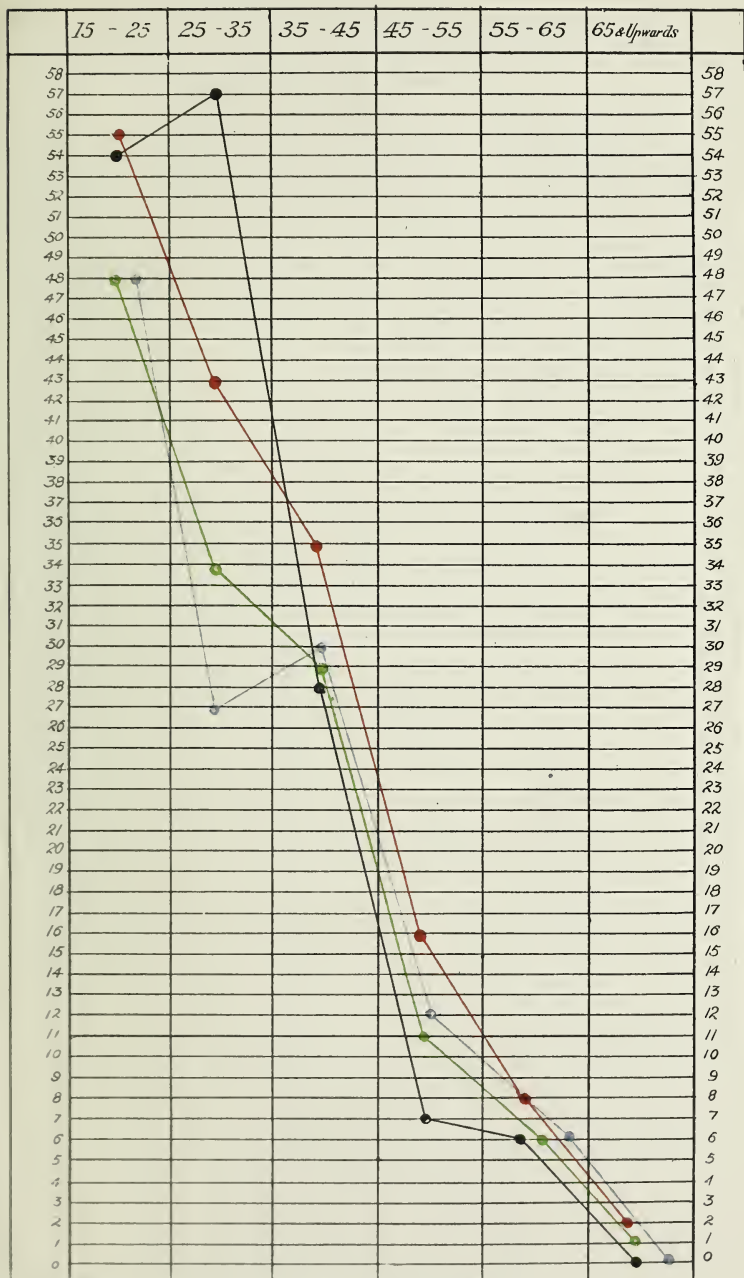
15-25	48	0.9	1.0
25-35	34	1.1	1.4
35-45	29	1.7	1.8
45-55	11	1.5	1.8
55-65	6	1.8	1.1
65 and upwards	1	0.7	0.6

1906-1910.

15-25	48	0.9	0.9
25-35	27	0.8	1.3
35-45	30	1.5	1.6
45-55	12	1.3	1.6
55-65	6	1.5	1.6
65 and upwards	0	0.0	0.2

CHART 6.

Deaths from Phthisis amongst Weavers from 1891—1910,
in 5 year periods.



Black indicates period 1891-1896

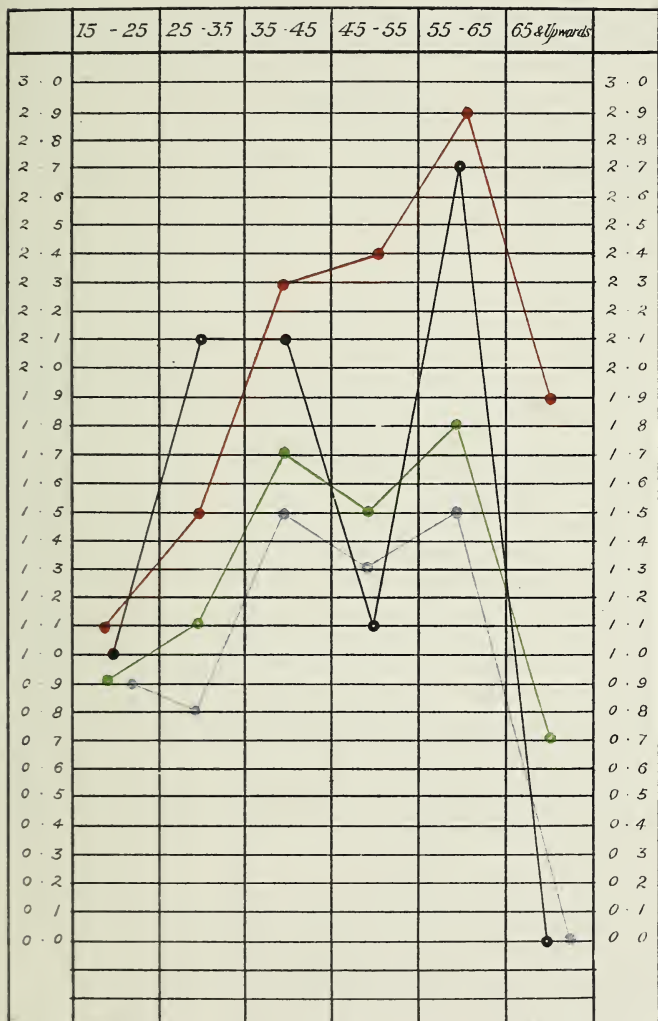
Red indicates period 1896-1900

Green indicates period 1901-1905

Blue indicates period 1906-1910

CHART 7.

Average Death Rates from Phthisis amongst Weavers
from 1891—1910, in 5 year periods.



Black indicates period 1891-1895

Red indicates period 1896-1900

Green indicates period 1901-1905

Blue indicates period 1906-1910

TABLE LXXVI.

NUMBERS AND AVERAGE DEATH-RATES FROM
RESPIRATORY DISEASES OTHER THAN PHTHISIS,
AMONGST WEAVERS DURING THE LAST FOUR
QUINQUENNIAL PERIODS.

1891-1895.

Age-Periods	Number	Death-Rate	Average Death-Rates of whole Borough from Respiratory Diseases
15-25	39	0.7	0.8
25-35	30	1.1	1.2
35-45	40	3.0	3.7
45-55	37	5.9	7.6
55-65	36	16.5	15.9
65 and upwards	41	65.6	35.6

1896-1900.

15-25	21	0.4	0.6
25-35	18	0.6	1.0
35-45	28	1.8	2.4
45-55	27	4.0	5.0
55-65	39	14.3	12.8
65 and upwards	35	34.3	27.1

1901-1905.

15-25	10	0.2	0.4
25-35	12	0.4	0.7
35-45	12	0.7	1.4
45-55	28	3.9	4.7
55-65	35	10.7	10.1
65 and upwards	25	17.6	23.8

1906-1910.

15-25	9	0.1	0.4
25-35	11	0.3	0.5
35-45	13	0.6	1.4
45-55	24	2.6	2.6
55-65	36	9.3	9.7
65 and upwards	39	21.1	23.0

From the preceding Tables and Charts the following conclusions may be drawn:—

1. That the average death-rates amongst Weavers in the four quinquennial periods from 1891 to 1910, *i.e.*, in 20 years, have shown a progressive diminution.

2. This satisfactory diminution has occurred amongst male and female weavers.

3. The average death-rates from Phthisis amongst Weavers during the four quinquennial periods from 1891 to 1910 show a steady diminution.

4. The average death-rates from Respiratory Diseases other than Phthisis amongst Weavers during the same periods show an equally satisfactory progressive diminution.

These four conclusions are, in my opinion, as important as any which have ever appeared in the Annual Health Reports for Blackburn, and I am able to state with confidence that the conditions under which the weavers are employed have improved enormously, and that the death-rates amongst this large and important section of the population of the Borough continues to improve.

FEVER HOSPITAL.

The Fever Hospital is situated in Park Lee Road, on an open site of $10\frac{1}{2}$ acres, and at a height of 560 feet above sea-level.

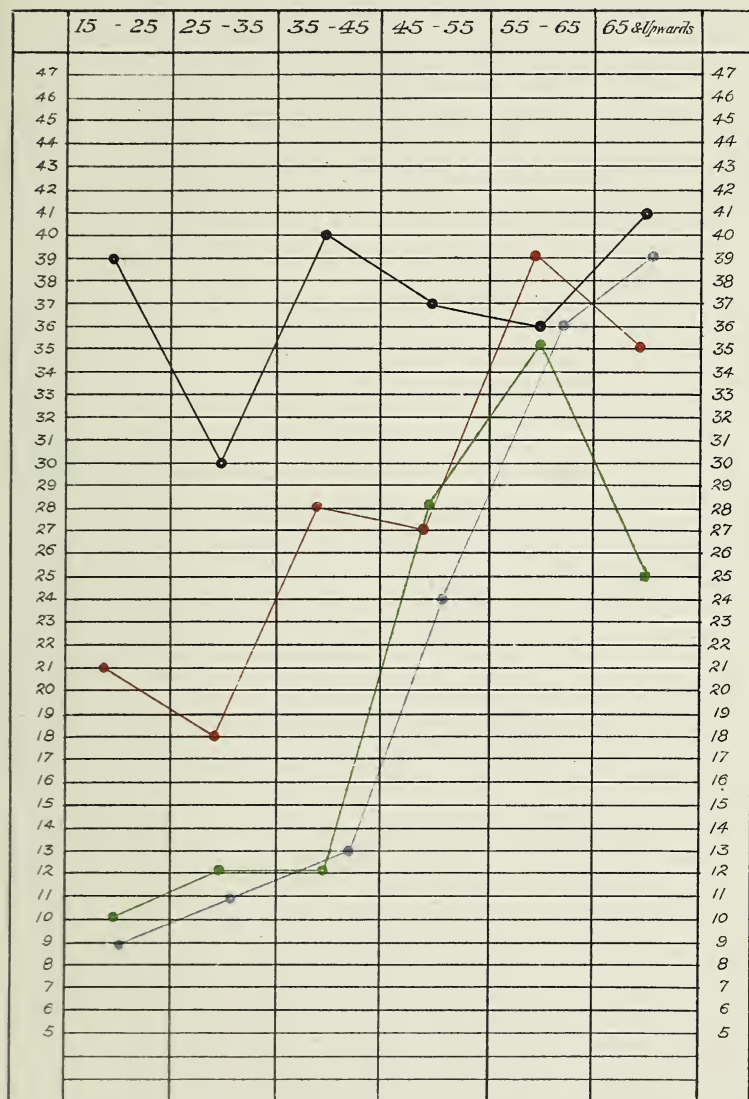
Full particulars appeared in my Annual Health Report for 1903, respecting cost, buildings, number of beds, etc.

The following Table gives an analysis of the number of patients admitted to the Fever Hospital during 1912, the number of deaths, and other details.

It will be observed that the average number of beds occupied was 15.9, which is 32.7 less than during 1911. This is a re-

CHART 8.

Deaths from Respiratory Diseases other than Phthisis amongst Weavers from 1891—1910, in 5 year periods.



Black indicates period 1891-1895

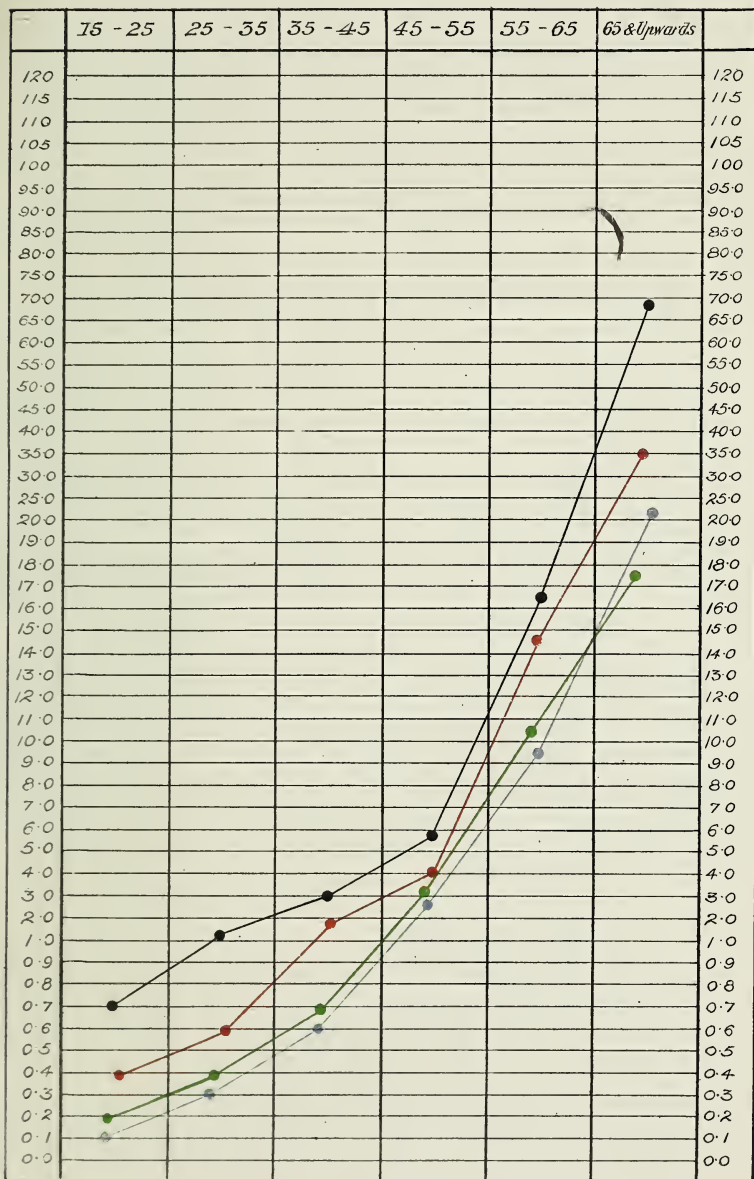
Red indicates period 1896-1900

Green indicates period 1901-1905

Blue indicates period 1906-1910

CHART 9.

Average Death Rate from Respiratory Diseases other than Phthisis amongst Weavers from 1891-1910, in 5 year periods.



Black indicates period 1891-1895

Red indicates period 1896-1900

Green indicates period 1901-1905

Blue indicates period 1906-1910

markable diminution, and is due to the extremely small number of cases of Scarlet Fever and Typhoid Fever which were notified during 1912. In fact, during a considerable portion of the year the Typhoid Fever Pavilion was not in use.

The average number of days occupied in the Hospital by the patients was 43.5, which is 5.1 less than during 1911.

The public still continue to regard the Fever Hospital as an institution for saving life, and it is appreciated by all classes of the community. Any prejudice which may have existed against it in former years has disappeared. In fact, there is now no trouble whatever in persuading patients to enter that institution.

The usual repairs and renovating have been carried out where necessary. Fire appliances have been fixed throughout. The administrative block is being enlarged, at a cost of more than £2,000. in order to cope with future work.

The Convalescent Scarlet Fever Pavilion is, at present, being used as a Tuberculosis Ward for 25 patients of both sexes, and a new Verandah is being erected in connection with that Pavilion, so that the open-air treatment may be extended. Both insured patients under the National Insurance Act and non-insured patients are receiving treatment, and the cost for maintenance of the insured patients is being borne by the Blackburn Insurance Committee.

I have again followed the plan which was initiated in my Annual Report for 1903, and continued annually since then, of giving full details of the patients treated in the Fever Hospital, dealing with each disease separately.

Dr. Buchanan has rendered me valuable assistance in analysing the Register for this purpose.

TABLE LXXVII.—FEVER HOSPITAL.

Notified Disease.	Patients remaining in hospital on January 1st, 1912.			Patients admitted and discharged in 1912.			Patients remaining in hospital on January 1st, 1913.			Analysis of all cases admitted in 1912: whether discharged or not during the year.				Average No. of Beds occupied during 1912.	Cases removed expressed as a percentage of total notified.
	Total	Recov- ered.	Died.	Total	Recov- ered.	Died.	Total	Recov- ered.	Died.	Total	Recov- ered.	Died.	Case M'tality	Average No. of Beds occupied during 1912.	
Scarlet Fever ...	20	20	0	69	67	2	9	9	0	78	76	2	2.5	9.2	67.2
Enteric Fever...	8	8	0	20	16	4	0	0	0	20	16	4	20.0	2.4	76.9
Diphtheria.....	2	2	0	33	28	5	3	3	0	36	31	5	13.9	4.3	56.3
Totals	30	30	0	122	101	11	12	12	0	134	121	11	8.2	15.9	65.4

This Table includes 5 cases admitted from outside the Borough during 1912, and the percentages are worked out on the total number of admissions into Hospital.

SCARLET FEVER.

The total number of cases admitted during the year as Scarlet Fever was 78. Of these, three were negative cases, leaving 75 true cases admitted as such.

Two cases admitted as Diphtheria were found to be suffering from Scarlet Fever, and not from the former disease.

The total number of cases of Scarlet Fever, therefore, during the year was 77. All these came from within the Borough.

The following complications and sequelæ occurred amongst the Scarlet Fever patients :—

Complications.	No. of Cases.
Albuminuria	5
Cervical Adenitis—	
Non-Suppurative	9
Suppurative	2
Axillary Adenitis (Suppurative)	1
Rhinorrhœa	7
Otorrhœa	4
Septic Fingers	6
Cardiac Dilatation	5
Endocarditis	4
Sore Nose and Mouth	4
Bronchitis	3
Eczema	2
Secondary Sore Throat	2
Broncho-pneumonia	2
Pulmonary Tuberculosis	2
Rheumatism	2
Blepharitis	1
Phlyctenular Conjunctivitis	1
Nephritis	1
Urticaria	1
Meningitis	1
Parotitis	1

There were two cases of Relapse. Both recovered.

Of the three negative cases, one was a baby, 9 days old, who developed Scarlet Fever 5 days after admission. Another was found to be suffering from Septic Pharyngitis; while the third had Febricula with a rash, the result of intestinal intoxication. All three recovered.

One patient had a Chicken-pox Rash seven days before admission. She was isolated on admission, and none of the other patients became infected.

Another patient had Measles a fortnight prior to admission. Prompt isolation of this case also prevented the disease from spreading.

There were no cases of Whooping-Cough among the Scarlet Fever patients; nor were there any cases of Post-Scarlatinal Diphtheria during the year.

CASES OF SCARLET FEVER AND DIPHThERIA OCCURRING CONCURRENTLY, BUT CERTIFIED AS DIPHThERIA OR SCARLET FEVER.

Only one such case occurred in 1912.—No. 79. Boy, 6 years; admitted to the Diphtheria pavilion on July 1st (the sixth day of illness). The diagnosis of Diphtheria was confirmed by bacteriological examination. The boy desquamated three weeks later, but was not discharged until September 10th, owing to the persistence of Diphtheria bacilli in his nose. There was no spread of infection from this case.

I.—RETURN CASES OF SCARLET FEVER.

During the year only one case occurred which could be termed a "return" case, a word used to indicate the reappearance of Scarlet Fever infection in a household within one month after the return home of a Scarlet Fever patient from the Hospital.

The "infecting" case was a boy, 6 years old (No. 15). He was admitted on January 24th, and discharged on March 12th, a stay of 49 days. Whilst in hospital his only complication was sore nostrils, which was cured before discharge and did not recur.

The "infected" case was his sister, 10 years old (No. 45), who became ill on the 25th of March (a fortnight after her brother's discharge), and was taken to hospital the following day.

They were allowed to play together from the 12th till the 25th of March, but they did not sleep together.

The "infected" case was attending, up to the 25th of March, a school from which several cases of Scarlet Fever were notified during the month.

It is interesting to note that another sister, who attended the same school, developed Scarlet Fever on February 19th, and was admitted to Hospital on the same date—almost four weeks after her brother.

II.—SECONDARY CASES OCCURRING IN A HOUSE FROM WHICH THE FIRST CASE WAS REMOVED TO HOSPITAL, BUT WHICH OCCURRED BEFORE THE FIRST CASE WAS DISCHARGED FROM HOSPITAL.

There were four such cases during 1912. The periods between the onset of the first case and the onset of the second case were 26, 4, 15, and 39 days, respectively.

Table LXXVIII.—Secondary Cases of Scarlet Fever occurring while the first case was in Hospital.

INFECTING CASE.				INFECTED CASE.				Interval in days.
Case Number.	Description.	Date of Onset	Date of Admission.	Case Number.	Description.	Date of Onset.	Date of Admission.	
1	W.P., male, 6 years	Jan. 24th	Jan. 24th	1	A.P., female, 8 years	Feb. 19th	Feb. 19th	26
2	D.M.B., female, 7 years	Oct. 22nd	Oct. 24th	2	W.B., male, 4 years	Oct. 26th	Oct. 28th	4
3	G.H., female, 7 years	Nov. 2nd	Nov. 4th	3	A.H., female, 9 years	Nov. 17th	Nov. 18th	15
4	J.M., male, 7 years	Oct. 23rd	Oct. 26th	4	A.M., female, 5 years	Dec. 1st	Dec. 2nd	39

III.—SECONDARY CASES OF SCARLET FEVER OCCURRING IN A
HOUSE IN WHICH THE FIRST CASE WAS NURSED AT HOME.

There were two such cases during the year. In one, the period between the onset of the first case and that of the second case was three days, in the other it was four days.

TABLE LXXIX.

Monthly Admissions of Scarlet Fever Cases to Fever
Hospital during 1912.

Month.	Total Number of Scarlet Fever Cases Notified.	Scarlet Fever Removals	Percentages of Removals of S. F.
January	20	12	60.0
February	14	10	71.4
March	9	6	66.6
April	3	3	100.0
May	8	4	50.0
June	10	8	80.0
July	2	1	50.0
August	5	5	100.0
September	6	3	50.0
October	12	10	83.3
November.....	16	8	50.0
December.....	11	8	72.7
Totals.....	116	78	67.2

TABLE LXXX.

The following table shows the percentage of Scarlet Fever removals in wards during 1912.

Wards.	Percentages.
St. Stephen's	50·0
Trinity	75·0
St. Michael's	87·5
St. John's	100·0
St. Silas's	55·0
St. Paul's	58·3
St. Peter's	100·0
St. Mary's	75·0
St. Matthew's	75·0
St. Thomas's	60·0
Park	100·0
St. Luke's	20·0
St. Mark's	14·3
St. Andrew's	88·8

TYPHOID FEVER.

The total number of cases admitted to the Hospital certified as Typhoid Fever was 20.

Three of these were found not to be suffering from this disease, leaving 17 true cases of Typhoid Fever.

There were no cases of Typhoid Fever admitted from outside the Borough during 1912.

Of the 3 negative cases—

No 48 was suffering from Cerebral Thrombosis, and was discharged after a stay of 83 days.

No. 60 had Lobar Pneumonia, and made a good recovery.

No. 81 had Influenza with Gastric symptoms, and recovered.

The following complications and sequelæ occurred :—

Bronchitis	8 cases.
Retention of Urine	3 „
Cardiac Dilatation	3 „
Hæmorrhage	3 „
Albuminuria	2 „
Otorrhœa	2 „
Meningitis	2 „
Anæmia	2 „
Cystitis	1 case.
Peritonitis	1 „
Perforation	1 „
Hæmaturia	1 „
Pneumonia	1 „
Congestion of Lungs	1 „
Jaundice	1 „

There were three cases of Relapse among the 17 true cases of Typhoid Fever. All three recovered.

No. 38, a male, 20 years, admitted March 11th, developed Scarlet Fever ten days later. He was isolated on the appearance of the rash, and no other cases occurred among the Typhoid Fever patients. Recovery was complete, and he was discharged 54 days after admission.

TABLE LXXXI.

The following table shows the percentage of Typhoid Fever removals in Wards during 1912.

Ward.	Percentages.
St. Stephen's	100·0
Trinity	66·6
St. Michael's	0·0
St. John's	50·0
St. Silas's	0·0
St. Paul's	100·0
St. Peter's	100·0
St. Mary's	100·0
St. Matthew's	100·0
St. Thomas's ..	100·0
Park	100·0
St. Luke's.....	100·0
St. Mark's	100·0
St. Andrew's.....	0·0

Showing cases of Scarlet Fever and Typhoid Fever removed to Hospital, expressed as a percentage of the cases notified :—

Year.	Scarlet Fever.	Typhoid Fever.
1895	56.0	45.4
1896	63.0	53.8
1897	61.0	51.4
1898	50.0	43.0
1899	47.0	54.0
1900	26.0	43.5
1901	26.7	59.5
1902	56.4	62.2
1903	69.0	60.8
1904	72.2	70.2
1905	71.6	62.2
1906	73.3	73.1
1907	70.9	57.3
1908	72.6	72.9
1909	75.0	65.2
1910	66.6	47.8
1911	70.2	77.5
1912	67.2	76.9

DIPHTHERIA.

Thirty-six cases were admitted to the Hospital certified as suffering from Diphtheria.

Five cases were negative, leaving 31 true cases of this disease.

There were five cases admitted from outside the Borough. All of these were true cases.

Two of the negative cases were Scarlet Fever ; the remaining three had sore throats due to the *Streptococcus Pyogenes*. All five got well.

Of the 31 true cases of Diphtheria, eight had the larynx markedly affected, on three of whom Tracheotomy was performed.

No. 62. Boy, $2\frac{1}{2}$ years. Admitted May 22nd, on the third day of illness. Tracheotomy was performed on May 23rd. Death took place on May 27th, from Broncho-pneumonia and Heart Failure.

No. 76. Boy, 4 years. Admitted June 22nd, on the fourth day of illness. Tracheotomy performed on admission. Death occurred on June 24th, from Paralysis of the Diaphragm.

No. 80. Boy, 5 years. Admitted July 3rd, on the fourth day of illness. Tracheotomy was performed five hours after admission. This patient subsequently had Whooping-Cough and Bronchitis, but recovered and was discharged on August 30th, having been 59 days in hospital.

The following complications and sequelæ occurred among the Diphtheria patients :—

Albuminuria	9 cases.
Antitoxin Rash	9 ,,
Irregular Action of Heart	2 ,,
Dilatation of Heart	1 case.
Paralysis of—	
Heart	5 cases.
Palate	3 ,,
Eye Muscles	1 case.
Diaphragm	1 case.
Bronchitis	2 cases.
Suppression of Urine	1 case.
Epistaxis	1 ,,
Pneumonia	1 ,,
Broncho-pneumonia	1 ,,
Otorrhœa	1 ,,

OUTBREAK OF SCARLET FEVER AMONGST DIPHTHERIA PATIENTS.

Two such cases occurred :--

No. 2. Boy, 6 years. Admitted January 8th ; developed Scarlet Fever, January 31st. Recovered.

No. 36. Boy, 8 years. Admitted March 7th ; developed Scarlet Fever, April 14th. Recovered.

In neither case was the source of infection traced ; and isolation prevented the further spread of the disease.

TABLE LXXXII.

The following Table shows the percentage of Diphtheria removals in Wards during 1912.

Wards	Percentages
St Stephen's.....	100'0
Trinity	33'0
St. Michael's	100'0
St. John's	50 0
St. Silas's	33'3
St. Paul's	62'5
St. Peter's	0'0
St Mary's	75'0
St. Matthew's	66'6
St. Thomas's	66'6
Park	100'0
St. Luke's	0'0
St. Mark's	42'8
St. Andrew's	44'4

TABLE LXXXIII.

Deaths in the Fever Hospital during 1912.

No.	Date.	Name.	Age.	No. of Days in Hospital	Disease.
1	Jan. 9	T.C.	4 years.	4 hours	Diphtheria.
2	„ 25	H.P.	2½ „	4 days	Diphtheria.
3	Feb. 3	H.W.	1½ „	22 „	Scarlet Fever.
4	May 27	L.J.	2½ „	6 „	Diphtheria.
5	June 6	J.S.	4 „	36 „	Scarlet Fever.
6	„ 24	C.B.	4 „	3 „	Diphtheria.
7	July 24	A.B.	35 „	9 „	Typhoid Fever.
8	Aug. 13	J.S.	30 „	17 „	Typhoid Fever.
9	Sept. 17	J.A.	7 „	11 „	Diphtheria.
10	Nov. 16	W.T.S.	29 „	8 „	Typhoid Fever.
11	„ 26	M.A.B.	41 „	8 „	Typhoid Fever.

TABLE LXXXIV.

The following bacteriological work has been carried out at the Fever Hospital Laboratory during 1912.

Material Examined.	Positive.	Negative	Total
FOR TUBERCLE BACILLI :			
Sputum	63	227	290
Udders	13	6	19
Other Organs	0	2	2
Urine	0	1	1
FOR DIPHTHERIA BACILLI :			
Throat Swabs	41	198	239
Nose Swabs	13	46	59
FOR TINEA :			
Hair	69	13	82
Totals.....	199	493	692

TYPES OF SANITARY CONVENIENCES IN BLACKBURN AT THE END OF 1912.

The Local Government Board have instructed me to include the following information in each future Annual Health Report as to the number of each type of sanitary convenience in Blackburn, at the end of 1912 :—

No. of privy middens (fixed receptacles)	128
„ pail and tub-closets	9,986
„ fresh-water closets	22,272
„ waste-water closets	930

Practically all the privy middens now remaining are on the outskirts of the Borough, where there is no available sewer. The Health Committee are to be congratulated upon their vigour in causing such an immense number of privy middens to be converted to fresh-water closets during the past eleven years.

It is to be hoped that the conversion of pail-closets will proceed as satisfactorily in the future.

SCAVENGING.

I would again mention the desirability of removing the contents of ash-bins, in such a way as to minimise, as far as possible, all pollution of the surfaces of streets or of back passages.

It is exceedingly important that all brick ash receptacles should be replaced by portable metal bins, of a uniform size.

The following statement represents the work carried out in this branch of sanitation during 1912, under the direction of Superintendent Marginson :—

Wet ash-pits emptied	482
Dry ash-pits emptied	170,557
Ashes tubs emptied	449,559
Excreta tubs emptied	574,786
Excreta tubs cleansed	574,670

821 Loads of Dry Ashes Refuse, and 102 Loads of Midden Refuse were tipped during the year. The majority of these were from the outlying districts situated a long distance from the nearest Destructor, and a few when the Destructors have been closed down for repairs.

DESTRUCTORS.

An account of the four Destructors built and worked by the Blackburn Corporation was given in my Annual Report for 1905.

The Refuse during 1912 was destroyed at the following Destructors :—

AUDLEY DESTRUCTOR :

	Tons.	Cwts.	Qrs.
Dry ashes refuse	5,820	4	1
Midden refuse	55	2	0
Fish and Market refuse, diseased carcases, etc.	1,208	18	0
Total	7,084	4	1

GREENBANK DESTRUCTOR :

Dry ashes refuse	11,513	14	0
Midden refuse	9	5	2
Fish and Market refuse	81	8	1
Total	11,604	7	3

WLSLEY FOLD DESTRUCTOR :

Dry ashes refuse	11,015	18	3
Fish and Market refuse	175	16	3
Total	11,191	15	2

STORE YARD DESTRUCTOR :

Dry ashes refuse—Total	2,417	6	3
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TABLE LXXXV.

REFUSE DESTROYED AT DESTRUCTORS, 1912.

Month	Dry Ashes Refuse			Midden Refuse			Fish and Market Refuse, Diseased Carcases, etc.			Totals.		
	T.	C.	Q.	T.	C.	Q.	T.	C.	Q.	T.	C.	Q.
Jan.	3067	0	2	...	...	...	118	9	1	3185	9	3
Feb.	2551	9	2	21	5	0	110	0	3	2682	15	1
Mch.	2871	1	0	...	...	...	123	2	2	2994	3	2
April	2701	11	0	...	...	...	123	18	1	2825	9	1
May	2627	9	2	2	3	0	119	14	1	2749	6	3
June	2260	7	2	4	11	0	122	7	2	2387	6	0
July	2264	1	0	15	14	0	134	2	1	2413	17	1
Aug.	2051	0	1	10	16	2	120	6	0	2182	2	3
Sept.	2378	1	3	9	18	0	124	18	1	2512	18	0
Oct.	2624	9	0	...	...	...	124	5	2	2748	14	2
Nov.	2634	5	3	...	...	...	116	2	2	2750	8	1
Dec.	2736	7	0	...	...	...	128	16	0	2865	3	0
Totals	30767	3	3	64	7	2	1466	3	0	32297	14	1

SEWAGE DISPOSAL.

The following is a brief account of the method of dealing with Blackburn Sewage, for which I am indebted to Dr. Pickard :—

The larger portion of the sewage of the Borough is collected by gravitation at Witton, where it is screened and passed through catch-pits to remove the gravel and rags which have obtained access to the sewers. It then travels to Samlesbury, a distance of $4\frac{1}{2}$ miles, in duplicate cast-iron pipe syphons and brick tunnels. A portion of the sewage from the low-lying districts is now lifted into the conduits by new electrically-driven centrifugal pumps, situated at Fenisccliffe Bridge. Another main conduit takes the sewage from Beardwood district to Samlesbury.

On arriving at Samlesbury, the sewage passes through a detritus tank into the septic tanks. These are two in number, and together hold six million gallons, being a dry-weather flow of about 30 hours. After septicisation, the sewage is treated with lime and sedimented in six tanks which have a total capacity of about one million gallons. The effluent from these tanks is then treated either on percolating sprinkler beds, or on double contact beds. The sprinkler beds, 19 in number and each 80 feet in diameter, are fitted with revolving distributors. They are constructed of rubble stone and filled to a depth of nine feet with broken stone and destructor clinker. The small amount of suspended matter in the effluent from the sprinkler beds is removed in five separator tanks. The sprinklers will deal with up to six million gallons of sewage per day, according to the strength of the sewage. There are twelve pairs of double contact beds, which are filled with graded stone, destructor clinker, and iron slag. A little over one million gallons of sewage per day is treated on these beds, the effluent from which passes directly into the river. There is also ample provision for the treatment of storm-water. This passes into ten tanks which were constructed for chemical precipitation and which together

hold $1\frac{3}{4}$ million gallons. After sedimentation in these, the storm-water (in excess of six million gallons per day) is either distributed over about 400 acres of farm land contoured and partially drained for broad irrigation, or treated on the contact beds, which are then used as streaming beds.

WATER SUPPLY.

Blackburn has, fortunately, an excellent water supply. It is a moorland water, coming from the Brennand and Whitendale Valleys, about 20 miles from the Borough.

ANALYSIS OF WATER.

I am indebted to Dr. Pickard for the following results :—

RESULTS OF ANALYSIS OF BLACKBURN WATER.

Samples drawn from the main at the Technical School.

TABLE LXXXVI.

Date	15/4/12	7/5/12	13/9/12	16/12/12
Total Solids in Solution	4.70	5.24	5.32	4.72
Including Mineral Matter	3.30	3.88	3.24	3.08
Chlorides expressed as Chlorine	1.0	1.0	1.0	1.0
Saline Ammonia	0.0023	0.0020	0.0015	0.0019
Organic Ammonia	0.0096	0.0053	0.012	0.0096
Nitrogen as Nitrites	Nil	Nil	Nil	Nil
Ditto as Nitrates	0.015	0.015	0.018	0.018
Permanent Hardness ...	1.90	2.08	1.43	1.69
Temporary Hardness ...	0.10	0.39	0.13	Nil

All results are in parts per 100,000.

I am indebted to the Borough Engineer for the following records of rainfall during 1912 in connection with the Blackburn Corporation Waterworks :—

Table LXXXVII.—RAINFALL at the following Stations in the Counties of Lancaster and York.

DATE.	LANCASHIRE.										WEST RIDING OF THE COUNTY OF YORK.				
	Blackburn Waterworks Office, Elevation 436	Blackburn Corporation Store Yard, Elevation 373	Blackburn High Level Pumping Station, Elevation 600	Witton Corporation Park, Elevation 550	Guide Elevation 650	Daisy Green Elevation 960	Pickup Bank Elevation 720	Ilford Sewage Works, Elevation 685	Sambury Sewage Works, Elevation —	Dunsop Houses Elevation 450	Brennand Elevation 820	Whitdale Elevation 830	Cabinhill Elevation 1559	Middle Knoll Elevation 1296	Baxton Fell Elevation 1540
	Gauge 6 ft. above ground														
1912.															
January	1.82	2.78	3.61	4.01	3.45	3.04	3.62	3.76	3.98	6.42	6.46	6.74	5.10	5.10	5.10
February	.68	1.50	1.73	1.85	1.88	1.91	2.26	2.29	2.35	3.11	2.85	2.77	2.60	2.70	2.60
March ...	3.85	4.91	5.99	6.54	5.96	6.38	7.06	7.14	7.91	10.11	11.03	9.96	9.60	8.60	8.80
April ...	.55	.55	.92	.91	.89	.85	.92	1.03	1.01	1.55	2.13	2.46	2.30	1.90	1.90
May ...	1.63	1.59	2.47	2.38	2.70	2.11	2.34	2.33	2.59	3.40	3.55	3.31	3.50	2.80	3.30
June ...	4.47	5.07	5.71	5.87	6.15	5.87	6.40	6.44	6.84	8.68	10.57	9.43	11.40	8.60	8.80
July ...	4.06	4.54	5.45	5.63	5.49	4.72	5.35	5.24	5.26	5.12	5.67	4.53	5.50	4.30	4.0
August ...	5.11	6.24	7.32	7.39	7.34	6.66	7.77	8.04	8.40	8.54	9.10	8.15	8.80	8.10	8.30
Sept'ber	1.28	1.30	2.05	1.98	2.24	1.93	2.38	2.46	1.58	3.19	3.64	3.15	3.60	2.20	2.40
October	3.40	3.87	4.50	4.76	4.52	4.69	5.94	6.31	3.81	6.72	6.41	6.19	5.80	5.60	6.20
Nv'ber	2.62	3.14	4.10	4.37	3.99	3.57	4.12	4.13	3.22	7.24	8.92	9.29	8.20	7.10	6.90
Dec'ber	2.89	3.66	4.43	4.96	4.40	4.76	4.90	5.20	5.58	7.59	7.07	7.29	6.10	4.60	5.30
Totals for 1912	32.36	39.15	48.28	50.65	49.10	46.49	53.06	53.93	56.92	71.67	77.40	73.22	72.50	61.60	64.10

AVERAGE FOR TEN GAUGES :—47.24.

AVERAGE FOR SIX GAUGES :—70.08.

RAINFALL, IN																
1911.....	29.97	35.98	42.82	44.63	43.47	46.63	46.66	47.47	46.86	33.92	65.44	70.73	70.17	65.30	58.70	64.00
1910.....	34.27	39.60	48.59	49.88	50.39	48.96	52.62	52.57	55.22	39.01	65.40	77.26	77.95	73.80	61.30	68.40
1909.....	30.83	35.48	44.41	45.86	44.69	44.05	49.22	49.47	52.69	38.32	67.46	74.36	75.72	69.09	59.80	65.64
1908.....	28.32	27.88	39.23	40.67	38.88	38.17	42.76	42.19	45.50	36.94	64.83	70.99	70.28	63.90	60.70	63.50
1907.....	29.99	32.92	41.13	44.44	42.39	39.40	45.93	45.63	48.88	39.80	66.16	69.48	72.69	84.82	57.50	1.80
1906.....	31.40	34.27	44.55	43.81	43.02	40.29	48.97	47.89	51.06	39.65	67.11	76.73	77.91	68.70	55.60	63.00
1905.....	24.46	28.35	34.73	33.39	35.38	30.80	40.72	40.46	42.23	31.70	54.02	63.85	61.72	60.50	50.40	51.90
1904.....	25.22	31.10	34.88	35.00	35.84	30.39	40.95	40.59	43.21	32.22	55.69	63.85	62.31	55.20	46.00	51.60
1903.....	38.82	44.76	50.42	52.28	52.08	44.02	57.05	56.79	61.43	—	83.43	86.34	89.94	75.10	76.30	77.40
1902.....	28.18	31.48	38.76	37.98	37.75	32.80	40.72	38.88	42.38	—	49.50	61.22	58.92	57.73	46.35	47.51
1901.....	25.36	29.84	33.83	34.97	34.51	30.94	39.74	37.30	45.44	—	49.61	59.20	62.90	49.50	45.00	55.40
1900.....	—	36.05	—	43.37	43.77	44.42	49.32	48.98	53.52	—	63.98	70.16	70.43	61.35	65.55	61.65
1899.....	35.61	33.67	42.11	40.85	40.78	37.33	44.43	46.67	63.50	—	60.17	61.34	64.39	57.26	51.10	54.10
1898.....	28.57	29.79	35.16	39.97	—	38.24	41.00	43.13	54.27	31.24	61.27	67.96	76.35	75.50	57.28	59.80
1897.....	35.98	36.34	42.27	45.42	—	43.44	53.43	54.49	57.42	38.35	70.21	73.64	78.98	68.00	61.30	62.45
1896.....	32.70	33.34	40.82	41.89	—	40.84	55.10	54.36	56.80	31.40	60.48	73.24	70.52	56.85	52.35	56.45
1895.....	29.65	31.44	38.80	37.51	—	34.70	46.91	45.68	62.64	22.24	56.61	64.40	64.94	52.48	49.95	54.43
1894.....	25.69	31.49	40.73	41.54	—	38.15	51.18	48.42	71.31	32.26	71.36	76.68	77.40	63.87	57.55	61.80
1893.....	30.90	32.79	40.20	39.99	—	39.24	45.41	43.79	48.80	36.56	63.83	69.06	74.86	64.62	54.15	50.12
1892.....	29.22	33.63	40.93	40.73	—	38.90	48.93	45.06	48.97	43.02	64.07	70.50	72.21	59.41	54.81	58.06

TABLE LXXXVIII.

Consumption of Water for the year 1912.

MONTH.	Fish Moor Reservoir.	Audley Reservoir	Guide Reservoir.	Bowland Works.	Total.
January	71,870,000	10,450,000	7,797,000	7,636,000	97,753,000
February.....	84,140,000	13,390,000	9,703,000	7,686,000	114,919,000
March.....	78,210,000	11,880,000	8,398,000	7,287,000	105,775,000
April.....	77,790,000	10,990,000	6,972,000	7,448,000	103,200,000
May.....	84,510,000	12,470,000	7,332,000	7,776,000	112,088,000
June.....	82,750,000	11,680,000	8,170,000	7,631,000	110,231,000
July.....	89,500,000	13,310,000	8,734,000	8,525,000	120,069,000
August.....	83,850,000	9,720,000	7,544,000	7,537,000	108,651,000
September...	82,360,000	12,050,000	8,067,000	8,269,000	110,746,000
October.....	83,660,000	12,200,000	9,008,000	8,573,000	113,441,000
November...	75,650,000	12,465,000	8,524,000	7,628,000	104,267,000
December...	77,950,000	13,830,000	9,605,000	8,469,000	109,854,000
Total ...	972,240,000	144,435,000	99,854,000	94,465,000	1,310,994 000

Analysis of Water Consumption.

	Business by Meter.	Miscellaneous Business, Stables, Watering Streets, etc.	Domestic and Waste.	Total.
Annual Consumption.	416,012,950	164,227,128	730,753.922	1,310,994,000
Average Daily Consumption.	1,136.647	448,708	1,996,595	3,581,950
Daily Consumption per Head.	8.23	3.25	14.46	25.94

Consumption of Water from 1895.

Year.	Quantity.	Year.	Quantity.
1895	1,287,465,000	1904	1,201,611,000
1896	1,202,346,000	1905	1,218,226,000
1897	1,191,272,000	1906	1,240,443,000
1898	1,222,664,000	1907	1,231,775,000
1899	1,350,864,000	1908	1,283,057,000
1900	1,253,964,000	1909	1,281,101,000
1901	1,121,287,000	1910	1,282,860,000
1902	1,172,240,000	1911	1,308,778,000
1903	1,216,475,000	1912	1,310,994,000

DISINFECTANTS.

The following quantities of disinfectants have been used by the Health Department during 1912 :—

1. Chloros, 1,705 gallons.
2. Chloride of Lime, 2 tons ocwt. 2qrs.
3. Sanitary Dry Lime, 9,920 7lb. bags.
4. Carbolic Powder, 254 gross 11 dozen.

The total cost of the above disinfectants was £435 5s. 4d., compared with a cost of £405 10s. 6d. during 1911.

HOUSE DRAINAGE.

One of my Inspectors, namely, Inspector Lees, devotes his whole time to this work, as it is found that house drains require special attention, continuously, throughout the town.

It will be noticed that there is an increase of the work of testing drains by smoke in comparison with the drains so tested during previous years.

This is due to the fact that many short lengths of drains were tested which formerly were passed on simple inspection. At first, many defects were thus revealed, but now the drains are laid much more carefully. Also the drains of whole rows of houses have been tested, and numerous unsuspected defects discovered and remedied.

Altogether, this work has justified fully the appointment of a whole-time Inspector.

During the year 1912, 433 drains have been inspected, necessitating the application of the smoke test in 801 cases, and of the water-test in 684 cases.

366 Drains were found defective, and of these, 227 were re-laid throughout, and stood the water-test ; also 15 drains were

partly re-laid and stood the water-test. In addition, 15 drains were partly re-laid and passed on the smoke-test, owing to being short lengths.

The number of defective drains not re-laid at the end of December, 1912, was 109.

During the re-laying and repairing of the drains, 1,723 visits were made, including the application of the water-test in 684 instances.

In addition to the above work, the following outstanding work has also been attended to :—

The drains not re-laid, or other work outstanding on December 31st, 1911, numbered 92, and of these, 84 have been re-laid, together with 8 drains outstanding from 1910, which consisted of 180 branch drains, necessitating the application of 150 water-tests, and 16 smoke-tests ; 143 new gulley-traps, with lip-dishstones, were provided, and 12 inspection chambers were constructed. Also 69 new slop waste-pipes and 59 new rain-water spouts were provided.

The surfaces of 30 yards have been flagged throughout, and the surfaces of 47 yards have been repaired. Ten pail-closets and 14 slop-water closets have been converted to fresh-water pedestal wash-down closets.

The above work, which was outstanding at the end of the year 1911, was carried out during the early part of the year 1912 in a satisfactory manner.

The following statement shows in detail the drainage work which has been carried out during the year 1912 :—

No. of Drains inspected	433
„ Drains tested on account of Typhoid Fever	26
„ „ on account of Diphtheria	52

No. of Drains tested owing to complaints	126
„ „ at the request of owners or new tenants	33
„ Drains tested owing to other causes	196
„ Letters from the Medical Officer of Health	223
„ Preliminary Notices served	30
„ Legal Notices served	1
„ Cases in which work was carried out by verbal arrangement	26
„ Visits to work in progress	1,723
„ Drains tested (a) smoke	801
„ Drains tested (b) water	684
„ Drains examined apart from above (a and b) by breaking down	189
„ Drains tested for leakage, with coloured solution	155
„ Drains found defective	366
„ Drains tested and found not defective	67
„ Drains re-laid throughout which stood the water-test	227
„ Drains partly re-laid which stood the water-test (short lengths)	15
„ Drains partly re-laid and passed on the smoke-test (short lengths)	15
„ Defective drains not re-laid at the end of December, 1912	109
„ Drains opened and cleansed (not re-laid)	10
„ Defective gullies re-placed	321
„ New lip-dishstones provided	330
„ Inspection chambers provided	36
„ Slop-water closet drains opened and cleansed ...	6
„ Down-spouts repaired	124
„ Soil-pipes replaced or repaired	15
„ Surface of the yards flagged after drains re-laid	45
„ Surface of the yards repaired after drains re-laid	107
„ Pail-closets converted to W.C.'s	16
„ Sink-pipes repaired	93
„ Useless drains removed from cellar premises	4

No. of Slop-water closets converted to pedestal wash-down W.C.'s	11
„ Flushing apparatus repaired	53
„ New pedestal wash-downs provided	47
„ General repairs	14

HOUSING AND TOWN PLANNING ACT, 1909.

In my Annual Report for 1910, I gave a full account of the scheme which it was proposed to follow in Blackburn with respect to the administration of this Act.

A copy of the inquiry form to be used at each house inspected was also included in that report.

This form is probably fuller than that used in many other large towns, but the examination of each house is rendered correspondingly more complete.

In this work special attention has been paid to the existence or otherwise of overcrowding in bedrooms.

The following Tables show the work which has been carried out in connection with the Housing and Town Planning Act by each of the four District Inspectors.

It will be seen that a total number of 1,000 houses have been inspected carefully. Of this number, bedrooms in only 14 houses were found to be overcrowded. Since notices were sent the overcrowding at seven of these houses has ceased.

The necessary notices were sent for other defects found, and a large amount of remedial work was carried out during the year.

The following particulars show the situation of the most insanitary property dealt with during the year :—

Houses ordered to be closed :—

- 1, 3, 5, 7, 9, 11, and 13, Rodgett-street.
- 2, 4, 6, 8, 10, 12, and 14, Rodgett-street.
- 2, 4, 6, 8, and 10, Printer-street.
- 1, 3, 5, 7, 9, 11, and 13, Mill-street.
- 1 and 3, Bates-street.
- 3, Back Blakey-street.

Houses ordered to be altered to the satisfaction of the Medical Officer of Health, or closed :—

- 12 and 14, Back Blakey-street.
- 20, 22, and 24, Snig Brook.
- 29, Bank Top.
- 1 and 3, Radcliffe-street.

Houses ordered to be demolished :—

- 16 and 18, Snig Brook.

59 pail-closets were ordered to be converted to fresh-water closets.

TABLE LXXXIX.

HOUSING AND TOWN PLANNING ACT, 1909.

District.....	1	2	3	4	Total
Number of Houses inspected during 1912 of which records are kept ...	260	187	286	267	1000
Number of Houses found satisfactory	54	17	16	45	132
Number of Houses not kept in a reasonable condition, concerning which notices have been served ...	206	137	260	208	811
Number of houses in which the ordered work is completed	153	49	144	172	518
Number of Houses concerning which work is in hand, to be followed up under Sect. 91 P.H.A. 1875	23	40	116	25	204
Number of Houses in which notices have not been complied with at the end of the year 1912	30	48	...	11	89
Number of Houses reported for visiting by the Committee .....	...	33	10	14	57
Number of Houses closed as unfit for human habitation .....	...	...	...	...	5
Number of Houses ordered to be altered to the satisfaction of M.O.H. or closed .....	...	...	...	...	45
Number of houses demolished .....	...	...	...	...	2
Number of Houses found to be overcrowded	2	6	2	4	14

TABLE XC.
HOUSING AND TOWN PLANNING ACT, 1909.
Inspections in No. 1 District for 1912.

Name of Street	Number of Houses	Number Over-crowded	Number Satisfactory	Number for which Notices have been served	Work Completed	Work in Progress	Work not done	Reported to Committee for inspection	Closed	Altered or Closed	Closed on failing to do the work	Demonstrated
Audley Street	33	...	5	28	25	...	3	...	...	...	...	...
Billinge Street	55	1	7	48	30	...	18	...	...	...	...	...
Cook Street	21	...	1	20	20	...	...	...	...	...	...	...
Lambeth Street	7	...	1	6	3	...	3	...	...	...	...	...
Moss Hall	9	...	1	8	...	8	...	...	...	...	...	...
Pendle Street	94	1	19	75	63	10	2	...	...	...	...	...
Skiddaw Street	41	...	20	21	12	5	4	...	...	...	...	...
	260	2	54	206	153	23	30	...	...	...	...	...

Inspections in No. 2 District for 1912.

Almond Street	4	1	1	3	...	3	...	...	...	...	...	...
Birley Street	29	1	5	24	5	9	10	...	...	...	...	...
Brookhouse Lane ...	3	...	...	3	3	...	...	...	...	...	...	...
Duxbury Street ...	2	...	...	2	2	...	...	...	...	...	...	...
Ellershaw Court ...	1	...	...	1	1	...	...	...	...	...	...	...
Fisher Street	25	1	4	21	5	8	8	...	...	...	...	...
Mount Pleasant	21	2	1	...	...	...	...	20	...	...	...	...
Swarbrick Street ...	16	1	...	15	7	6	2	1	...	...	...	...
Union Buildings ...	86	...	6	68	26	14	28	12	...	...	...	...
	187	6	17	137	49	40	48	33	...	...	...	...

TABLE XCI.
HOUSING AND TOWN PLANNING ACT, 1909—continued.
Inspection in No. 3 District for 1912.

Name of Street	Number of Houses	Number Over-crowded	Number satisfactory	Number for which Notices have been served	Work Completed	Work in Progress	Work not done	Reported to Committee for Inspection	Closed or Closed	Altered or Closed	Closed on failing to do the work	Demonstrated
Cooper Street	14	...	...	14	7	7	...	...	...	...	...	...
Cook's Yard	2	...	...	2	...	2	...	...	...	...	...	...
Dugdale Street	19	2	3	16	11	5	...	...	...	...	...	...
Barley Lane	21	...	...	21	21	...	...	...	...	...	...	...
Blakey Street	41	...	1	40	23	17	...	...	...	...	...	...
Blakey Court	1	...	...	1	1	...	...	...	...	...	...	...
Back Barley Lane	2	...	...	2	2	...	...	...	...	...	...	...
Back Cooper Street	2	...	...	2	2	...	...	...	...	...	...	...
Longfield Street	33	...	1	32	28	4	...	...	...	...	...	...
Lund Street	7	...	1	6	...	6	...	...	...	...	...	...
Leyland Street	21	...	2	19	13	6	...	...	...	...	...	...
Little Peel Street	11	...	...	11	4	7	...	...	...	...	...	...
Lord Byron Street	4	...	...	4	4	...	...	...	...	...	...	...
Redlam	6	...	...	...	...	...	...	6	...	...	...	...
Spring Lane	4	...	...	...	...	...	...	4	...	...	...	...
Snig Brook	59	...	6	53	21	32	...	...	...	...	...	...
Turner Street	14	...	1	13	...	13	...	...	...	...	...	...
Throstle Street	25	...	1	24	7	17	...	...	...	...	...	...
	286	2	16	260	144	126	...	10	...	...	...	...

TABLE XCII.

HOUSING AND TOWN PLANNING ACT, 1909—continued.
Inspections in No. 4 District for 1912.

Name of Street	Number of Houses	Number Over-crowded	Number of factories	Number for which Notices have been served	Work Completed	Work in Progress	Work not done	Reported to Committee for inspection	Closed	Altered or Closed	Closed on failing to do the work	Demonstrated
Back Friday Street	10	...	1	9	9	...	...	...	...	...	...	...
Back Nelson Street	1	...	...	1	1	...	...	...	...	...	...	...
Nelson Street	5	...	4	1	...	1	...	...	...	...	...	...
Joiner's Row	9	1	1	8	8	...	...	...	...	...	...	...
Eccles Row	22	1	...	22	22	...	...	...	...	...	...	...
Gregson Lane	5	...	...	4	4	...	...	1	...	...	...	...
Back Warwick St.	1	...	...	...	...	...	...	1	...	...	...	...
Pearson Street	10	...	1	4	3	1	...	5	...	...	...	...
Harley Street	3	...	...	3	...	3	...	...	...	...	...	...
Bolton Court	6	...	...	4	4	...	...	2	1	...	...	...
Leyland Street	26	...	3	22	15	3	4	1	...	...	...	...
Harrison Street	37	...	12	22	22	...	...	3	3	...	...	...
Canning Street	49	2	4	45	37	8	...	...	...	...	...	...
South-West Street	11	...	...	11	6	2	3	...	...	...	...	...
Fox Street	51	...	12	39	36	...	3	...	...	...	...	...
Shorrocks Street	5	...	2	3	...	2	1	...	...	...	...	...
Meadow Lane	16	...	5	10	5	5	...	1	...	...	...	...
	267	4	45	208	172	25	11	14	4	...	...	...

ECONOMIC VALUE OF A REDUCED DEATH-RATE.

It has been shown that each member of the community has a definite money value based upon the power of earning wages.

The value in the case of each male has been estimated by taking as the standard a labourer, and capitalising the wages earned by him, the means of subsistence being deducted.

The average net value of each male life is found to be £150. Assuming that one-half of the 263 lives gained in Blackburn during 1912, on the average of the previous ten years, were males, there would be a net gain to the wealth of the community of £19,800.

Assuming also that the remaining female lives were also equal to a certain money value, the net gain in wealth would exceed this sum.

TABLE XCIII.

NAME OF DISEASE	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	Average 1902 to 1911	1912
Cancer	0.69	0.70	0.81	0.85	0.80	0.84	0.79	0.78	0.92	0.84	0.80	0.95
Diarrhoea	0.53	0.76	0.94	0.70	1.28	0.41	1.12	0.44	0.57	1.56	0.83	0.29
Respiratory Diseases..	3.56	3.41	3.79	3.10	2.73	3.73	3.00	3.65	2.65	3.15	3.27	3.10
Measles	0.58	0.40	0.45	0.31	0.47	0.33	0.11	0.30	0.28	0.21	0.34	0.38
Erysipelas	0.02	0.007	0.02	0.01	0.06	0.02	0.02	0.01	0.02	0.01	0.01	0.01
Diphtheria	0.17	0.19	0.08	0.24	0.19	0.12	0.08	0.13	0.16	0.21	0.15	0.06
Scarlet Fever	0.22	0.09	0.09	0.57	0.24	0.15	0.14	0.38	0.19	0.07	0.21	0.02
Typhoid Fever	0.17	0.11	0.15	0.11	0.10	0.09	0.10	0.13	0.06	0.06	0.10	0.05
Whooping Cough	0.17	0.10	0.72	0.08	0.12	0.30	0.19	0.16	0.10	0.37	0.23	0.20
Old Age	0.82	0.96	1.15	1.04	1.07	1.19	1.04	1.24	0.95	1.04	1.05	1.05
Influenza.....	0.20	0.20	0.12	0.15	0.16	0.32	0.25	0.33	0.20	0.10	0.20	0.14
Premature Birth	0.53	0.63	0.60	0.50	0.53	0.57	0.48	0.44	0.46	0.54	0.52	0.50
Nervous Diseases.....	1.55	1.41	1.44	1.52	1.71	1.62	1.80	1.70	1.46	1.74	1.59	1.99
Digestive Diseases	0.73	0.56	0.59	0.63	0.58	0.63	0.63	0.66	0.46	0.56	0.60	0.54
Urinary Diseases	0.46	0.44	0.52	0.58	0.32	0.60	0.45	0.56	0.54	0.50	0.49	0.55
Phthisis	1.25	0.93	0.94	1.06	0.92	0.98	1.09	0.99	0.80	0.89	0.98	1.81
Heart Diseases	1.28	1.44	1.47	1.16	1.39	1.47	1.27	1.37	1.16	1.35	1.33	1.36
Other Tubercular Diseases (excluding Tabes Mesenterica)	0.57	0.48	0.34	0.42	0.44	0.39	0.30	0.29	0.24	0.24	0.37	0.13
Tabes Mesenterica	0.18	0.21	0.30	0.20	0.25	0.26	0.20	0.16	0.16	0.09	0.20	0.11
Ill-defined	0.94	0.57	0.37	0.85	0.63	0.63	0.51	1.49	0.73	0.45	0.71	0.29
Violence	0.47	0.45	0.43	0.45	0.51	0.52	0.56	0.50	0.40	0.43	0.47	0.48

Table showing gains and losses in the death-rate per 1,000 persons living in the year 1912, as compared with the average rate of ten years, 1902 to 1911.

TABLE XCIV.—GAINS.

Name of Diseases.	Average Rate during ten years, 1902-11.	Rate during 1912.	Gains per 1000.	Probable number of lives gained.
All Causes	16.27	14.43	1.84	263
Diarrhœa	0.83	0.29	0.54	77
Respiratory Diseases	3.27	3.10	0.17	24
Diphtheria	0.15	0.06	0.09	13
Scarlet Fever	0.21	0.02	0.19	27
Typhoid Fever	0.10	0.05	0.05	7
Whooping Cough ..	0.23	0.20	0.03	4
Influenza	0.20	0.14	0.06	9
Premature Birth ..	0.52	0.50	0.02	3
Digestive Diseases ..	0.60	0.54	0.06	9
Phthisis	0.98	0.81	0.17	24
Other tubercular Diseases	0.37	0.13	0.24	34
Tabes Mesenterica ...	0.20	0.11	0.09	13
Ill defined Causes ...	0.71	0.29	0.42	60
Other Diseases	2.88	2.48	0.40	57
			2.53	361

LOSSES.

Name of Diseases.	Average rate during 10 y'r 1902-1911.	Rate during 1912.	Losses per 1000	Probable No. of lives lost.
Cancer	0.80	0.95	0.15	22
Measles	0.34	0.38	0.04	5
Nervous Diseases ...	1.59	1.99	0.40	57
Urinary Diseases ...	0.49	0.55	0.06	9
Heart Diseases	1.33	1.36	0.03	4
Violence	0.47	0.48	0.01	1
			0.69	98

Nett gain, 1.84, or 263 lives.

The death of a person in a population of 133,539 corresponds to a rate of 0.007 per 1,000. Hence the saving or loss of a rate of 0.007 means the saving or loss of one human life; similarly 0.035 means the saving or loss of five human lives; and 0.070 means the saving or loss of ten human lives, therefore 1.84 means the saving or loss of 263 human lives.

BLACKBURN UNION. Poor Law Relief Statistics.
TABLE XCV.

	Half-year ended Lady Day, 1912.	Half-year ended Mich'lmas, 1912.	Total.
	£ s. d.	£ s. d.	£ s. d.
Cost of Out-door relief in the Blackburn Union	4262 8 5	3125 6 3	7387 14 8
	Persons in receipt of relief on July 1, 1912	Persons in receipt of relief on Jan. 1, 1912	Average Number.
Males	182	168	
Females	480	466	
Children	396	379	
Total	1058	1013	1036

Statement of the number of Indoor Paupers relieved in the Blackburn
Union Workhouse.

	Persons in receipt of relief on July 1, 1912	Persons in receipt of relief on Jan. 1, 1913	Average Number.
Able-bodied	275	275	
Not Able-bodied	327	434	
Insane.....	108	129	
Children ...	66	61	
Totals	776	899	838
Numbers included in above statement who were inmates of the Workhouse Infirmary	208	210	209
Children in Cottage Homes	98	104	101
	Half-year ended Lady Day, 1912.	Half-year ended Mich'lmas, 1912.	
Vagrants ...	6830	8731	7781

I am indebted to Mr. C. E. Bygrave for these figures, which have an indirect bearing upon the health conditions and statistics of the town.

METEOROLOGICAL OBSERVATIONS.

The Meteorological Station is situated on an open site in the Corporation Park.

Daily readings of each instrument are taken at 9 a.m. These instruments are :—

- 1.—Maximum Thermometer (Phillips's).
- 2.—Minimum Thermometer (Rutherford's).
- 3.—Hygrometer.
- 4 & 5.—Black and Bright Bulb Thermometers for Solar Radiation.
- 6.—Spirit Thermometer for Terrestrial Radiation.
- 7 & 8.—1 ft. and 4 ft. Earth Thermometers.
- 9.—Rain Gauge.
- 10.—Anemometer.
- 11.—Sunshine Recorder.
- 12.—Barometer (Förtin), kept at the Health Office.

A full description of the above instruments appeared in my Annual Report for 1903.

The total rainfall during 1912 was 49.332 inches, compared with 43.725 inches during 1911.

During 1912, rain fell on 244 days, compared with 226 days during 1911.

The wettest months of 1912 were August, June, and March, when there were 7.345, 6.105, and 6.005 inches of rainfall respectively.

The highest reading of the 4ft. Thermometer, during 1912, occurred on August 20th, namely, 57 degrees Fahrenheit. The highest reading during 1911 was 59 degrees Fahrenheit, on August 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, and 24th.

During 1912 there were 96 days without any bright sunshine, compared with 69 days during 1911 and 86 days during 1910.

The total amount of bright sunshine during 1912 was 1,059 hours 35 minutes, compared with 1,554 hours 40 minutes during 1911.

TABLE XCVI.—METEOROLOGICAL REPORT FOR THE YEAR 1912.

1912	Mean Pressure		Mean Relative Humidity.	Mean of Maximum and Minimum Temperature.	Mean Temperature at 9 a.m. Readings	Under-ground Temperature		Mean Black Bulb in Vacuo.	Mean Bright Bulb in Vacuo.	Absolute extremes of Temperature.			Mean daily minimum on the grass.	Mean depression of minimum on grass below the shade.	Total bright sunshine.	Most sunshine in one day.		Direction of the Wind.						Mean daily movement of wind.	Total rainfall.			
	Station Level.	Sea Level.				Highest.	Lowest.			Date.	Date.	Am't.				Date	N.	N.E.	E.	S.E.	S.	S.W.	W.			N.W.		
January ...	29.525	29.927	92.00	36.95	37.1	39.9	43.4	deg.	deg.	deg.	deg.	1st	21.5	29th	28.9	4.5	hrs. min.	2	6	3	3	6	3	7	1	169.9	3.480	
February	29.269	29.659	90.60	39.65	39.5	37.9	40.3	deg.	deg.	deg.	deg.	28th	18.0	3rd 4th	30.7	4.4	6—40	29th	1	5	2	2	13	3	3	0	212.9	1.919
March ...	29.222	29.605	87.80	42.55	42.5	42.3	43.0	deg.	deg.	deg.	deg.	1st 25th 26th	31.2	21st	33.6	4.4	7—0	28th	1	1	1	1	8	11	0	232.5	6.005	
April	29.759	30.141	72.30	46.10	47.9	45.9	44.9	deg.	deg.	deg.	deg.	21st	43.0	9th	33.2	5.5	12—30	24th	4	3	4	1	3	2	11	2	170.8	0.902
May	29.595	29.964	79.00	50.35	51.9	51.1	48.8	deg.	deg.	deg.	deg.	11th	37.0	24th	39.1	4.6	12—0	28th	1	5	0	1	5	5	10	4	134.5	2.716
June	29.466	29.822	80.10	54.50	55.9	54.8	51.7	deg.	deg.	deg.	deg.	22nd	43.7	17th	44.9	3.6	10—15	22nd	2	3	3	0	10	2	10	0	146.6	6.105
July	29.624	29.969	81.30	58.80	58.9	59.0	55.5	deg.	deg.	deg.	deg.	15th	45.5	19th	46.6	5.5	13—0	14th	0	8	5	2	3	5	5	3	154.9	5.500
August ...	29.329	29.689	84.30	52.90	53.8	55.4	55.0	deg.	deg.	deg.	deg.	4th	41.2	3rd	40.4	7.5	8—35	22nd	2	0	4	1	6	6	11	1	134.6	7.345
September	29.821	30.192	82.00	49.85	51.1	52.2	53.1	deg.	deg.	deg.	deg.	18th	35.5	11th	37.2	7.5	8—30	22nd	2	0	7	3	4	0	10	4	133.7	2.287
October...	29.453	29.826	86.60	46.60	46.9	47.2	49.8	deg.	deg.	deg.	deg.	9th 12th	30.5	3rd	31.2	9.2	7—15	3rd	1	3	3	0	8	7	7	2	146.4	4.533
November	29.491	29.873	89.70	41.85	42.5	43.8	46.8	deg.	deg.	deg.	deg.	7th	21.0	30th	29.9	8.3	6—25	14th	2	2	0	1	2	8	13	2	160.1	4.002
December	29.411	29.796	90.90	42.05	42.0	41.0	44.0	deg.	deg.	deg.	deg.	13th	22.5	1st	29.1	8.1	2—20	17th	0	0	1	0	17	8	5	0	256.3	4.538

SUMMARY OF THE METEOROLOGICAL REPORT FOR 1912.

- Mean monthly reading of the Barometer—29·872"
- Highest daily reading of the Barometer—30·529"
on April 15th.
- Lowest daily reading of the Barometer—28·888"
on March 4th.
- Highest reading of the Maximum Thermometer—81°·8
on July 15th.
- Lowest reading of the Minimum Thermometer—18° 0
on February 3rd & 4th.
- Total rainfall during the year—49·332 inches.
- Number of days during the year on which rain fell—244.
(6 days of which the fall was so slight as to be
insufficient to measure).
- The greatest number of days on which rain fell in one month—
28, in June.
- The highest reading of the 4ft. Thermometer during the
year—57° on August 20th.
- The greatest amount of bright sunshine in one month—
204 hours, 5 minutes, in April.
- The least amount of bright sunshine in one month—
8 hours, 25 minutes, in December.
- Number of days during the year without any bright sun-
shine—96.

SUMMARY OF WIND RECORDS

Number of days during the year on which the prevailing
wind was—

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm.
18	36	33	15	85	57	103	19	37

- The total number of miles registered during the year
was—62,629.
- The greatest number of miles registered during one day
was—590 on December 13th.
- The least number of miles registered during one day
was—8 on November 15th.

MEAT INSPECTION AND FARM INSPECTION.

The following details show the work carried out under my supervision by the Veterinary Inspector, who is also the Chief Meat Inspector, and by the Assistant Meat Inspector.

The total number of carcasses destroyed shows a decrease of $27\frac{1}{2}$ diseased carcasses when compared with the number destroyed during 1911.

The following are the figures relating to condemned carcasses during the last five years :—

	1908	1909	1910	1911	1912
Beef	91 ...	88 ...	70 ...	72 ...	66
Mutton ...	119 ...	110 ...	114 ...	100 $\frac{1}{2}$...	77
Veal	48 ...	65 ...	27 ...	64 ...	64
Pork	41 ...	51 ...	43 ...	32 ...	38
Goats	— ...	1 ...	2 ...	1 ...	—

The decrease was noticed chiefly in the number of carcasses of mutton destroyed during 1912.

With respect to the Tuberculous Carcasses which have been examined and rejected, they have been classified into cows, heifers, bulls, bullocks, calves, and pigs, as in previous years.

A total number of 11,266 of these six groups of animals were slaughtered during 1912, of which 348 were tuberculous, or a percentage of 3.0.

Similar percentages since 1902 have been as follows :—

1902	6.0
1903	5.1
1904	6.0
1905	5.8
1906	4.8

1907	4.3
1908	3.2
1909	2.7
1910	2.6
1911	2.0

This indicates for the most part a progressive diminution in the amount of tuberculosis which has been discovered amongst the animals slaughtered at the Blackburn Abattoir.

Tuberculosis was not present in any sheep out of a total number of 44,836 sheep slaughtered. This disease is extremely rare amongst sheep.

Of the above-named 348 tuberculous carcasses, 78, or 22.4 per cent., were rejected.

The percentages of tuberculous carcasses rejected during previous years were as follows:—

1904	22.1
1905	19.4
1906	19.0
1907	15.7
1908	13.8
1909	17.9
1910	16.4
1911	18.4

Of the above 348 tuberculous carcasses, 185 were cows, or 53.1 per cent., compared with 67.1 per cent. in 1911.

Of these 185 cows, 35, or 18.9 per cent., were rejected, compared with 13.7 per cent. of tuberculous cows rejected during 1911.

It is interesting to note that 343 of the 348 tuberculous animals were affected with Tuberculosis of the Lungs.

A similar condition has occurred in previous years.

The Table showing the tuberculous udders found at the Public Abattoir is interesting. Portions of these udders were examined microscopically.

The 18 tuberculous udders occurred in 2,156 cows slaughtered, or 0.8 per cent.

Similar percentages since 1902 have been as follows:—

1902	1.5
1903	1.9
1904	2.0
1905	1.7
1906	1.4
1907	1.4
1908	0.06
1909	0.7
1910	0.4
1911	0.5

Eleven of these 18 cows with tuberculous udders were giving milk on the day of slaughter.

Milk from two of these cows was sold in Blackburn.

Regarding the extent of the tuberculous process in these 18 cows, six exhibited the disease so extensively that they were rejected.

During 1912 one private slaughter-house has been closed. There are at the present time 12 private slaughter-houses in Blackburn where animals are slaughtered for sale as human food. It is hoped sincerely that the majority of these remaining private slaughter-houses will be closed in the near future. As I have stated many times, slaughtering and meat inspection would be carried out much more satisfactorily at the Public Abattoir if all the private slaughter-houses were closed.

I have also referred many times to the great care needed in cleanliness at milking and cleanliness during transit from the farm to the consumer, in order to ensure a purer milk supply.

During 1912, 2,060 diseased carcasses were examined at the Public Abattoir and Private Slaughter-houses in the Borough, 214 of which were rejected and destroyed as unfit for human food. Thirty-one immature carcasses of veal were also destroyed, making the total number of carcasses destroyed 245. Compared with last year, this return shows a decrease of $30\frac{1}{2}$ diseased carcasses and an increase of six immature calves.

During the year, 5,806lbs. of unsound meat, 562 rabbits, and a large quantity of fish were also destroyed. Compared with last year, this return shows a decrease of $3,952\frac{1}{2}$ lbs. of meat and 565 rabbits. The total weight of the rejected carcasses, organs, meat, etc. (excluding fish) destroyed during the year was 40 tons 8cwt. 1qr., which shows a decrease over last year of 4 tons 7cwt. 3qrs. $6\frac{1}{2}$ lbs.

The following Tables refer to the number of animals slaughtered at the Abattoir, the amount of dead meat brought to the Abattoir, the number of tuberculous carcasses and udders examined, the number of carcasses destroyed, and numerous other particulars relating to the inspection of meat and dairy cattle.

The large number of diseased animals, as mentioned above, is due principally to *Distoma Hepaticum* of the Liver in sheep, which necessitated the rejection of that organ.

TABLE XCIX.
NUMBER OF ANIMALS SLAUGHTERED AT THE
PUBLIC ABATTOIR

1912.	Beasts.	Sheep.	Calves.	Pigs.	Goats.
January	666	3466	105	653	...
February	637	3405	144	553	...
March	609	3141	161	510	...
April.....	614	3684	303	486	...
May	583	3919	92	325	...
June	574	4369	103	259	...
July	509	4685	102	261	...
August	368	3344	92	207	...
September	181	3211	150	243	...
October	192	4337	270	250	...
November	86	3686	133	64	...
December.....	205	3589	99	467	...
Totals	5224	44836	1754	4288	...

Compared with last year this table shows an increase of 2716 Sheep and 170 Calves, and a decrease of 1200 Beasts and 765 Pigs.

TABLE C.
NUMBER OF CARCASES AND AMOUNT OF MEAT
BROUGHT TO THE ABATTOIR.

1912.	CARCASES.			BEEF.		
	Beef.	Mutton.	Pork.	Hind Quarters.	Buttocks	Clods.
January.....	...	...	...	...	...	...
February ...	3	78	...	...	...	...
March .....	...	20	..	...	...	...
April.....	...	20	...	...	...	..
May .....	...	...	...	...	...	...
June .....	...	...	...	...	...	...
July	32	...	...	...	...	...
August	163	379	...	...	...	...
September	471	1002	...	...	...	...
October ...	682	361	210	...	...	...
November	825	191	496	...	...	...
December...	496	25	250	...	...	...
Totals	2672	2076	956	...	...	...

Compared with last year this table shows an increase of 2371½ Carcases of Beef, 1480 Carcases of Mutton and 956 Carcases of Pork, and a decrease of 182 Hind Quarters, 2 Buttocks and 14 Clods of Beef.

TABLE CI.—TUBERCULOUS CARCASSES EXAMINED AND REJECTED.

	Cows.		Heifers.		Bulls.		Bullocks.		Calves.		Sheep.		Pigs.		Totals.	
	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected	Exam'd	Rejected
1912.																
January	15	2	1	1	3	...	1	1	...	...	...	...	5	2	25	6
February	25	4	...	...	2	...	3	...	1	1	...	...	2	1	33	6
March	21	1	2	1	2	0	1	0	1	1	...	...	6	1	33	4
April	15	3	2	1	...	...	2	2	...	...	...	...	13	2	32	8
May	15	1	...	...	5	0	...	...	1	1	...	...	11	2	32	4
June	12	3	2	2	2	1	1	...	...	...	...	...	6	1	23	7
July	24	3	2	1	1	0	2	0	...	...	...	...	17	2	46	6
August	18	3	2	2	...	...	1	0	...	...	...	...	5	1	26	6
September	18	5	2	2	...	...	...	...	...	...	...	...	17	2	37	9
October	8	2	...	...	...	...	...	...	...	...	...	...	12	3	20	5
November	1	1	...	...	...	...	...	...	...	...	...	...	5	2	6	3
December	13	7	...	...	...	...	...	...	...	...	...	...	22	7	35	14
Totals	185	35	13	10	15	1	11	3	3	3	...	...	121	26	348	78

TABLE CII.—Tuberculous Cows exhibiting Tuberculous Disease in the Mammary Glands.

1912	No. of Cows	Age	Where from	EXTENT OF THE TUBERCULOUS PROCESS.		Was she giving milk on the day of slaughter?	Was milk from the farm sold in Blackburn?	Result of examination of the carcass.
				Generalized.	Localized.			
Jan. 8	1	Aged	Preston	No	Yes	Left posterior quarter	No	Passed
" 12	2	Aged	Preston	No	Yes	Right and left posterior quarters ..	No	Passed
Feb. 1	3	5 years	Clitheroe	No	Yes	Left anterior quarter	No	Passed
" 7	4	4 years	Hapton	Yes	No	Every quarter	No	Rejected
" 9	5	5 years	Edinburgh	Yes	No	Right and left anterior quarters	No	Rejected
May 24	6	5 years	Dinckley	No	Yes	Right anterior quarter	No	Passed
" 24	7	Aged	Aberdeen	No	Yes	Every quarter	No	Passed
June 12	8	Aged	Liverpool	No	Yes	Right posterior quarter	No	Passed
July 8	9	Aged	Preston	No	Yes	Every quarter	No	Passed
" 12	10	Aged	Preston	No	Yes	Right anterior quarter	No	Passed
Aug. 13	11	Aged	Dinckley	No	Yes	Left anterior quarter	No	Passed
" 16	12	Aged	Preston	No	Yes	Right anterior and posterior quarters ..	No	Passed
Sept. 3	13	Aged	Liverpool	No	Yes	Left posterior quarter	No	Passed
" 6	14	5 years	Feniscowles ..	No	Yes	Right and left posterior quarters	No	Passed
Dec. 6	15	4 years	Waddington ..	Yes	No	Right and left posterior quarters ..	No	Rejected
" 7	16	Aged	Preston	Yes	No	Left anterior quarter	No	Rejected
" 13	17	4 years	Mellor ..	Yes	No	Every quarter	Yes	Rejected
" 28	18	5 years	Mellor	Yes	No	Right posterior quarter	Yes	Rejected

TABLE CIII—TUBERCULOSIS IN THE ANIMALS SLAUGHTERED DURING THE TWELVE MONTHS ENDING 31st DECEMBER, 1912.

EXTENT OF THE TUBERCULOUS PROCESS.																
Kind of Animal.	Number Slaughtered.	Of which were Tuberculous	THORAX.				ABDOMEN.							Bones	Testicles	Udders
			Lungs	Heart and Pericardium	Serous Membranes	Livers	Stomachs	Spleens	Kidneys	Intestines	Uteri	Serous Membranes				
Cows	2156	182	182	24	71	78	63	40	48	41	1	47	1	...	18	
Heifers ..	439	13	13	4	10	10	9	10	6	6	...	6	...	...	...
Bulls	873	17	16	1	6	4	3	1	2	2	...	1	...	1	...	
Bullocks	1756	11	11	1	6	5	1	1	3	...	...	...	...	...	...
Calves	1744	3	3	1	3	3	2	2	2	...	...	...	...	...	...
Sheep	44836	...	...	...	..	...	...	...	...	...	...	...	...	...	...
Pigs	4288	119	118	...	10	118	22	25	4	...	...	...	8	1	...
Goat .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Totals.....	56092	345	343	31	106	218	100	79	65	49	1	54	9	2	18	

TABLE CIV.

DISEASED CARCASSES EXAMINED, REJECTED, AND
DESTROYED FOR DISEASES, ETC., OTHER THAN
TUBERCULOSIS.
CARCASSES.

BEEF.	MUTTON.	VEAL.	PORK.
1 Anthrax	14 Anasarca	1 Ascites	1 Arthritis
1 Congested and ill-bled	2 Ascites	1 Anasarca	1 Anasarca
1 Conditions &c. incidental to difficult parturition	1 Anæmia	2 Conditions, &c. incidental to overfeeding	1 Conditions, &c. incidental to difficult parturition
1 Extensively bruised	12 Congested and ill-bled	1 Enteritis	1 Cirrhosis of Liver
1 Enteritis (acute)	1 Conditions, &c. incidental to difficult parturition	1 Emaciate	1 Icterus
1 Nephritis	3 Congestion of Lungs, &c.	2 Icterus	2 Nephritis (acute)
2 Pyæmia	1 Congestion of Lungs & Liver	8 Joint-Ill	1 Pneumonia
2 Rheumatism	5 Emaciation	2 Navel-Ill	2 Pyæmia
3 Septicæmia	1 Extensively bruised	1 Pyrexia	1 Rachitis
3 Staggers	1 Gastritis	1 Pyæmia	1 Suffocation
1 Septic Metritis	1 Icterus	2 Suffocation	
	1 Innutritious	6 Unmarketable	
	12 Parasitic Disease of lungs and liver	2 White Scour	
	3 Peritonitis		
	2 Pyæmia		
	1 Putrefaction		
	4 Rheumatism		
	9 Suffocation		
	3 Unmarketable		
Totals 17	77	61	12

TOTAL NUMBER OF CARCASSES DESTROYED.

KIND OF CARCASE—1912.

Beef, 66—including 49 tuberculous and 1 anthrax.

Mutton, 77.

Veal, 64—including 31 immature and 3 tuberculous.

Pork, 38—including 26 tuberculous.

Total, 245 carcasses.

DISEASED ORGANS, &c., REJECTED & DESTROYED.

1912	Heads.	Sets of Lungs.	Hearts.	Diaphragms.	Livers.	Stomachs	Spleens	Kidneys	Udders.	Intestines	Tongues.	Testicles.
For Tuberculosis ..	100	264	1	13	139	31	6	16	18	4	...	1
For Diseases other than Tuberculosis	2	141	186	...	1546	4	...	46	7	..	...	...
Totals	102	405	187	13	1685	35	6	62	25	4	...	1

DISEASED TISSUES, ETC., FORWARDED TO THE FEVER HOSPITAL LABORATORY FOR EXAMINATION.

<i>Material.</i>	<i>Positive. Negative. Total.</i>				
Sections of cows' udders for tubercle bacilli	13	...	5	...	18
Other organs	0	...	2	...	2
	—		—		—
Totals	13	...	7	...	20

DISEASED, BRUISED, PUTRID, AND UNMARKETABLE MEAT
REJECTED AND DESTROYED APART FROM WHOLE CARCASSES.

1912.	Beef, Mutton, Pork and Veal.					lbs.
January	792
February	265
March	824
April	435
May	231
June	559
July	307
August	290
September	946
October	431
November	11
December	715
Total	5,806

FISH EXAMINED, REJECTED AND DESTROYED.

1912	Fish.									
	Boxes	Barrels	Bags	Kits	Case	Mackerel	Lbs. of Shrimps	Boxes of Shrimps	Pots of Shrimps	Lbs. of Fish
Totals	114	3	14½	1	1	700	92	1	72	17

RABBITS, TINNED FOODSTUFFS, FOWL, FRUIT, ETC.,
EXAMINED, REJECTED, AND DESTROYED.

Rabbits	Tins of Canned Fruit & Meat.	Baskets of Bilberries	Geese	Bags of Horse-beef.	Cases of Rabbits.	Boxes of Tomatoes	Jars of Black-berry.
562	42	51	1	1	1	25	41

NUMBER OF ANIMALS INSPECTED IN PRIVATE
SLAUGHTER-HOUSES.

Beasts.	Sheep.	Calves.	Pigs
1,357	11,521	445	274

WEIGHT OF REJECTED CARCASSES, ORGANS, MEAT, &c.,
FORWARDED FOR DESTRUCTION DURING THE YEAR
FROM THE ABATTOIR TO AUDLEY DESTRUCTOR.

1912.		Tons.		Cwts.		Qrs.		Lbs.
January	...	4	...	14	...	1	...	0
February	...	3	...	5	...	2	...	0
March	...	3	...	19	...	0	...	0
April	...	3	...	8	...	0	...	0
May	...	3	...	0	...	2	...	0
June	...	3	...	18	...	2	...	0
July	...	3	...	15	...	0	...	0
August	...	3	...	3	...	2	...	0
September	...	3	...	1	...	0	...	0
October	...	2	...	16	...	0	...	0
November	...	1	...	6	...	0	...	0
December	...	4	...	1	...	0	...	0
Totals	...	40		8		1		0

The above figures do not include the weight of Fish destroyed.

NUMBER OF VISITS, 1912.

To Butcher's Shops, etc.	4,175
To Private Slaughter-houses	1,764
To the Meat Market.....	351
To the Fish Market	422
To the Public Abattoir	530
To the Railway Station.....	144

Total..... 7,386 visits.

FARM AND DAIRY CATTLE INSPECTION.

During the year the Veterinary Inspector visited 211 farms, inspected 355 cowsheds, and examined the mammary glands of 3,747 cows.

The Inspector certified that four of the cows examined were suffering from Tuberculosis of their mammary glands, and the sale of their milk was immediately prohibited by myself.

Tuberculous Cows Exhibiting Mammary Tuberculosis.

No. of Cow.	Date of Certificate, 1912.	Situation of Farm in Blackburn.	Extent of Tuberculous Process in Cow's Udder.	Remarks.
1	Aug. 20	Feniscliffe	Right posterior quarter tuberculous	Sold to Butcher
2	Sept. 23	Feniscliffe	Right posterior quarter tuberculous	Sold to Butcher.
3	Dec. 13	Mellor	Every quarter tuberculous	Sold to Butcher.
4	Dec. 28	Mellor	Right posterior quarter tuberculous.	Sold to Butcher.

Sixteen cows were suffering from Mammitis and other abnormal conditions of their udders. The milk from these cows was not sold for human food.

The Inspector found 11 cows showing clinical symptoms of Tuberculosis, and requested their removal from the cowsheds and advised their immediate slaughter, which was carried out.

Of the 185 tuberculous cows slaughtered at the Abattoir, five only were brought from farms in the Borough, and three from the Blackburn Cattle Market. The others were brought from Salford, Liverpool, Preston, Amman, Edinburgh, Clitheroe, Aberdeen, Peterborough, Norwich, and farms in the surrounding district.

TUBERCULOUS UDDERS.

My letters of May 2nd and September 27th, to farmers in Blackburn, requiring them to notify to me every case, or suspected case, of Udder Tuberculosis in their dairy cows, has not been complied with in a satisfactory manner. Two farmers reported abnormal udders, and on examination the Veterinary Inspector found they were not tuberculous.

Of the four cases of Udder Tuberculosis discovered in dairy cows, in Blackburn cowsheds, none were notified to me by the owners, but were detected at farms by the Inspector during visits of inspection. Each of these cases should have been notified by the owners, as required by the Corporation Act, 1901, and the sale of their milk as human food would have been prevented much earlier.

BACTERIOLOGICAL EXAMINATION OF MILK FOR TUBERCLE BACILLI.

During the year 40 samples of milk were collected and forwarded to Professor Delépine for bacteriological examination.

The 40 samples examined for tubercle bacilli were obtained as follows:—5 unmixed samples were obtained direct from cows with abnormal udders, at farms in the Borough, 23 mixed samples were collected from milk-carts in the streets of Blackburn, and 8 mixed samples obtained direct from cows in the cowsheds; 4 samples were obtained direct from cows with abnormal udders at farms outside the Borough.

MIXED SAMPLES OF MILK COLLECTED IN COWSHEDS AT FARMS
IN THE BOROUGH.

Number of Sample.	Date of Collection	Number of Can.	Number of Cows.	Result of Examination.
1	Apr. 16	B 36	19	Negative. Tested by inoculation & found <i>not</i> to cause tuberculosis.
2	Apr. 16	28	20	
*3	Apr. 23	B 36	23	Do.
4	May 6	B 40	11	Do.
5	Sep. 24	B 40	12	Do.
6	Sep 24	B 36	10	Do.
7	Oct. 3	47	5	Do.
8	Oct. 3	14	21	Do.

The above Table shows that 8 samples were collected, representing the mixed milk of 121 cows.

The sample marked (*) was from cows supplying the Fever Hospital, and was found to be free from Tubercle bacilli, as were all the others.

UNMIXED SAMPLES OF MILK FROM COWS WITH ABNORMAL
UDDERS AT FARMS IN THE BOROUGH.

Number of Sample	Date of Collection	Number of Can	Evidence of Disease in Cow's Udder	Result of Examination.
1	May 6th	B 36	Left posterior quarter indurated	Negative. Tested by inoculation and found <i>not to cause tuberculosis.</i>
2	Aug. 27th	B 39	Right posterior quarter indurated	Positive. Tested by inoculation and found <i>to cause tuberculosis.</i>
3	Aug. 27th	B 37	Left posterior quarter indurated and enlarged	Negative. Tested by inoculation and found <i>not to cause tuberculosis</i>
4	Nov. 25th	B 40	Right posterior quarter enlarged	do. do.
5	Nov. 25th	B 39	Left posterior quarter Small nodule	do. do.

UNMIXED SAMPLES OF MILK FROM COWS WITH ABNORMAL
UDDERS AT FARMS OUTSIDE THE BOROUGH.

Number of Sample	Date of Collection	Number of Can	Evidence of Disease in Cow's Udder	Result of Examination.
1	Dec. 17th	B 37	Right posterior quarter enlarged and indurated	Positive. Tested by inoculation and found <i>to cause tuberculosis.</i>
2	Dec. 17th	B 36	*Right and left posterior quarters nodulated	Negative. Tested by inoculation and found <i>not to cause tuberculosis.</i>
3	Dec. 20th	B 40	Right posterior quarter enlarged and indurated	Positive. Tested by inoculation and found <i>to cause tuberculosis.</i>
4	Dec. 20th	B 39	Right and left posterior quarters indurated	Negative. Tested by inoculation and found <i>not to cause tuberculosis.</i>

TABLE CV.

SAMPLES OF MIXED MILK COLLECTED FROM MILK CARTS
IN THE STREETS OF BLACKBURN FROM FARMERS BRINGING
MILK INTO THE BOROUGH.

Number of Sample.	Date of Collection	Number of Can.	Number of Cows.	Result of Examination.
1	Mar. 1	8	16	Negative. Tested by inoculation and found <i>not</i> to cause Tuberculosis.
*2	„ 1	B 36	16	Do. do.
3	June 17	41	14	Do. do.
4	„ 17	53	8	Do. do.
5	„ 17	44	13	Do. do.
6	Nov. 6	B 40	15	Do. do.
7	„ 6	B 39	15	Do. do.
8	„ 13	B 36	3	Do. do.
9	„ 13	B 37	19	Positive. Tested by inoculation and found <i>to cause</i> Tuberculosis
10	„ 15	B 39	15	Do. do.
11	„ 15	B 40	24	Negative. Tested by inoculation and found <i>not to cause</i> Tuberculosis.
12	„ 22	B 36	12	Positive. Tested by inoculation and found <i>to cause</i> Tuberculosis
13	„ 22	B 37	22	Negative. Tested by inoculation and found <i>not to cause</i> Tuberculosis.
14	„ 28	B 36	10	Do. do.
15	„ 28	B 37	10	Do. do.
16	Dec. 3	B 36	30	Do. do.
17	„ 3	B 37	30	Do. do.
18	„ 3	B 39	14	Do. do.
19	„ 3	B 40	10	Do. do.
20	„ 10	B 36	14	Positive. Tested by inoculation and found <i>to cause</i> Tuberculosis
21	„ 10	B 37	18	Negative. Tested by inoculation and found <i>not to cause</i> Tuberculosis.
22	„ 10	B 39	10	Positive. Tested by inoculation and found <i>to cause</i> Tuberculosis
23	„ 10	B 40	16	Negative. Tested by inoculation and found <i>not to cause</i> Tuberculosis.

The above Table shows that 23 samples were collected, representing the milk of 354 cows.

Five samples, the mixed milk of 68 cows, were positive, and the remaining 18 samples, the mixed milk of 286 cows, were negative.

Sample marked * was from cows supplying the Blackburn Infirmary.

It will be seen that the samples of mixed milk Nos. 9, 10, 12, 20, and 22, collected from milk-carts in the streets of Blackburn, were tested by inoculation, and found to cause tuberculosis.

At my request, and by permission of the owners, the Veterinary Inspector visited the farms and examined the cows. He found one cow with a tuberculous udder, and the cow was destroyed immediately. In the other four cases he took unmixed samples from four cows, and in every case his diagnosis was confirmed by bacteriological examination. In each case the owners, acting on my advice, agreed to have the cows destroyed.

COWSHED INSPECTION.

The usual circular-letters sent by me, on May 2nd and September 27th, to all cowkeepers in the Borough, requiring the limewashing of cowsheds, have again been responded to in a satisfactory manner.

During the year the Veterinary Inspector inspected 355 cowsheds, and found that the majority of them were kept in a cleanly condition.

REPORT UNDER DISEASES OF ANIMALS ACTS AND ORDERS FOR THE YEAR 1912.

It shows the number of diseased carcases and animals brought into the Borough, the outbreaks of disease which have

occurred in the Borough, and the proceedings taken under the Diseases of Animals Acts and Board of Agriculture Orders made thereunder. It also gives the approximate number of animals exhibited for sale in the Cattle Market during the last six years.

The Veterinary Inspector is glad to state that, with the exception of Anthrax, all the scheduled diseases have been absent from the Borough during 1912.

The Anthrax Order of 1910 came into force on the 1st of January, 1911.

During the year the Veterinary Inspector made microscopical examinations of blood, etc., from the carcasses of 49 cattle, 71 sheep, 2 calves, and 14 pigs; total 136 carcasses; and found Anthrax bacilli in one case.

The positive specimen of blood, etc., was prepared in duplicate and, according to the Act of 1910, he forwarded an unstained slide preparation and a swab to the Chief Veterinary Officer of the Board of Agriculture for microscopical examination. His diagnosis was confirmed.

The case notified was as follows:—

Case.	1912.	Kind of Carcase and where from.
1	Jan. 25	A Cow was killed at Darwen and was brought to the knacker's yard in Blackburn

PARTICULARS OF CASE.

On January 23rd a cow was taken suddenly ill in a cowshed in Darwen, and was slaughtered and sent to J. W. Welding's, Knackers' Yard, Guide, Blackburn. On January 25th the Veterinary Inspector visited J. W. Welding's and examined

the carcase of the cow, and made a microscopical examination of the blood and found Anthrax Bacilli in large numbers. His diagnosis was confirmed by the Chief Veterinary Officer of the Board of Agriculture. The Darwen and Blackburn police were informed, and the knacker's premises, cart, chains, knives, etc., were disinfected in accordance with the provisions of the Anthrax Order of 1910.

It will be noticed that blood was illegally shed, carcase moved, carelessly cut and handled, thereby rendering disinfection extremely difficult.

After the discovery of the case, the carcase and infected premises were dealt with in accordance with the provisions of the Anthrax Order of 1910. The carcase, skin, litter, etc., were destroyed by exposure to a high temperature in the cell specially prepared at Audley Destructor for the destruction of diseased carcasses, under the Diseases of Animals Acts.

The infected premises, vehicles, utensils, etc., were carefully disinfected, and the Borough, County, and other police were promptly informed of the case.

ANTHRAX NOTICES, ETC.

A copy of the Anthrax Notice to Butchers, Knackers, etc., is posted in every slaughter-house in Blackburn.

The Board of Agriculture Returns for 1912 show that during the year 743 outbreaks of Anthrax, confirmed by the Veterinary Officers of the Board, occurred in Great Britain, in which 840 animals were affected.

The figures for the three preceding years are :—

Years.	Outbreaks.	Animals Affected.
1911	907	1,120
1910	1,496	1,776
1909	1,317	1,698

The following figures show the cases of Anthrax discovered and reported in Blackburn during the years :—

Years.	1904	1905	1906	1907	1908	1909	1910	1911	1912
Blackburn Cases	1	1	2	3	0	0	0	1	0
Outside Cases .									
Introduced	8	4	3	9	0	5	2	1	1
Totals	9	5	5	12	0	5	2	2	1

GLANDERS AND FARCY ORDER OF 1907.

No cases of Glanders or Farcy were notified in Blackburn during 1912.

SHEEP SCAB ORDER OF 1910.

The approximate number of fat sheep brought into Blackburn during the year was 44,836, and the number of store sheep exhibited for sale in the Cattle Market was 399.

No case of Sheep Scab was reported or detected among them.

FOOT AND MOUTH DISEASE.

During the year no outbreak of Foot and Mouth Disease has occurred within the County Borough of Blackburn, although on account of various outbreaks in the County of Lancashire, Blackburn (and district) was placed within the scheduled area as prescribed by the Board of Agriculture.

When the first actual outbreak amongst Irish cattle was confirmed by the Board of Agriculture, it was found that a number of animals which had been in contact with those found to be affected were distributed throughout Lancashire.

Those animals which came within the administrative area of the County Borough of Blackburn were traced, detained under notice, and inspected by the Veterinary Inspector.

In order to prevent any case of Foot and Mouth Disease being overlooked, he had exercised strict supervision of the Cattle Market, farms, Public Abattoir, and private slaughter-houses in this district, and made every possible provision for a careful inspection of every animal slaughtered, special attention being paid to the tongue and feet.

In carrying out the above duties, Mr. W. H. Goodman, the Assistant Meat Inspector, rendered valuable assistance.

PROSECUTION.

During the outbreaks of Foot and Mouth Disease, a firm of cattle dealers was fined 40s. and costs, at the Borough Police Court, for exhibiting for sale cattle contrary to the Acts and Orders of the Board of Agriculture.

DISEASES OF ANIMALS ACTS, 1894-1911.

SUMMARY OF RETURNS FOR 1912.

Foot and Mouth Disease.

Total Number of Outbreaks for the year ending	
December 31st, 1912	83
Number of Animals affected	645

Outbreaks. Animals Affected.

Corresponding period in 1911... 19	487
Corresponding period in 1910... 2	15

Glanders (including Farcy).

Total Number of Outbreaks for the year ending	
December 31st, 1912	173
Number of Animals affected	314

	Outbreaks.	Animals Affected.
Corresponding period in 1911... 209	504	
Corresponding period in 1910... 346	1,008	

Parasitic Mange.

Total Number of Outbreaks for the year ending	
December 31st, 1912	2,871
Number of Animals affected	6,074

	Outbreaks.	Animals Affected.
Corresponding period in 1911... —	—	—
Corresponding period in 1910... —	—	—

Sheep Scab.

Total Number of Outbreaks for the year ending	
December 31st, 1912	302
	Outbreaks.
Corresponding period in 1911	434
Corresponding period in 1910	574

Swine Fever.

Total Number of Outbreaks for the year ending	
December 31st, 1912	2,920
Number of Animals Slaughtered	39,653

	No. of Ani-
Outbreaks.	mals Slaughtered.
Corresponding period in 1911... 2,466	30,434
Corresponding period in 1910... 1,561	15,123

TABLE CVL.
Return showing origin of Store and Breeding Pigs moved under licence into the District
of the Local Authority of Blackburn.

COUNTY.	Stores 1909	Breeding 1909	Total 1909	Stores 1910	Breeding 1910	Total 1910	Stores 1911	Breeding 1911	Total 1911	Stores 1912	Breeding 1912	Total 1912
Shropshire .....	...	...	...	...	...	...	51	...	51	...	...	...
Bedfordshire .....	...	...	...	38	1	39	11	...	11	4	...	4
Lincolnshire .....	...	...	...	...	...	...	10	...	10	...	...	...
Anglesey	52	...	52	67	...	67	44	..	44	7	...	7
Norfolk .....	...	...	...	...	...	...	...	...	...	...	...	...
Cheshire .....	...	...	...	...	1	1	10	..	10	...	...	...
Essex	40	...	40	...	...	...	...	...	...	...	...	...
Lancashire	5	...	5	...	...	...	...	...	...	...	...	...
Huntingdonshire ..	20	...	20	6	...	6	...	...	...	...	...	...
Cambridgeshire ..	...	...	...	4	...	4	...	...	...	...	...	...
Cornwall .....	...	...	...	...	...	...	...	1	1	...	...	...
Sussex .....	...	...	...	...	...	...	...	1	1	...	...	...
Yorkshire .....	...	...	...	...	...	...	...	...	...	12	...	12

ORDER OF THE BOARD OF AGRICULTURE AND FISHERIES.

(DATED 15TH MARCH, 1912.)

The Board of Agriculture and Fisheries, by virtue and in exercise of the powers vested in them under the Diseases of Animals Acts, 1894 to 1911, and of every other power enabling them in this behalf, do order, and it is hereby ordered, as follows :

The provisions of the Importation of Dogs Order of 1901 and of the Importation of Canine Animals Order of 1909 shall apply respectively to a dog or a canine animal taken from the United Kingdom, the Channel Islands, or the Isle of Man into a port in any country out of the United Kingdom (except the Channel Islands or the Isle of Man), as if the animal were an imported animal, unless it is shown to the satisfaction of the Board that the animal has not been landed in that country and that while on board it has not been allowed to come in contact with any dog or other canine animal from that country, and unless the landing of the animal in Great Britain is authorised by a licence of the Board previously obtained.

In witness whereof the Board of Agriculture and Fisheries have hereunto set their Official Seal this fifteenth day of March, nineteen hundred and twelve.

T. H. ELLIOTT, *Secretary*.

ORDER OF THE BOARD OF AGRICULTURE AND FISHERIES.

(DATED 21ST MARCH, 1912.)

FOREIGN HAY AND STRAW ORDER OF 1912.

The Board of Agriculture and Fisheries, by virtue and in exercise of the powers vested in them under the Diseases of Animals Acts, 1894 to 1911, and of every other power enabling them in this behalf, do order, and it is hereby ordered, as follows :

Prohibition of Landing of Hay and Straw.

1. The landing in Great Britain of hay or straw brought from any country out of the United Kingdom which is not mentioned in the Schedule to this Order, is hereby prohibited, except as hereinafter expressly provided.

Exceptions.

2.—(1) This Order shall not apply to—

- (a) hay or straw which at the time of importation is being used for packing merchandise ; or
- (b) manufactured straw not intended for use as fodder or litter for animals ; or
- (c) hay or straw which is landed at a Foreign Animals Wharf for the purpose of being there destroyed or otherwise disposed of in accordance with any instructions given by the Board of Agriculture and Fisheries ; or
- (d) hay or straw which is authorised to be landed for use otherwise than as fodder or litter for animals by a licence granted by an Inspector or other Officer of the Board of Agriculture and Fisheries, which licence

shall contain such conditions as in the opinion of the Board are necessary to prevent the introduction of disease by the hay or straw.

(2.) The expression "animals" means horses, asses, and mules; cattle, sheep, goats, and all other ruminating animals; and swine.

Offences.

3.—(1.) If any hay or straw shall be landed in contravention of this Order, the owner thereof, and the owner and the lessee and the occupier of the place of landing, and the person causing, directing, or permitting the landing, and the owner and the charterer and the master of the vessel from which the same is landed, shall, each according to and in respect of his own acts or defaults, be deemed guilty of an offence against the Diseases of Animals Act, 1894.

(2.) If any person does any act in contravention of a condition imposed by a licence under this Order he shall be deemed guilty of an offence under the said Act.

Revocation of Orders.

4. The Foreign Hay and Straw Order of 1908 and any Order amending that Order are hereby revoked, and any licence under any Order hereby revoked shall have effect as a licence under this Order.

Commencement.

5. This Order shall come into operation on the first day of April, nineteen hundred and twelve.

Short Title.

6. This Order may be cited as the FOREIGN HAY AND STRAW ORDER OF 1912.

In witness whereof the Board of Agriculture and Fisheries have hereunto set their Official Seal this twenty-first day of March, nineteen hundred and twelve.

T. H. ELLIOTT, *Secretary.*

SCHEDULE.

Countries from which Importation is not Prohibited.

United States of America.

Dominion of Canada.

Union of South Africa.

Norway.

Channel Islands.

Isle of Man.

CATTLE MARKET.

The Cattle Market has been thoroughly cleansed and disinfected in accordance with the provisions of the Market and Sales Orders of 1903 and 1904, after each of the two markets held weekly.

Approximate number of animals exhibited for sale in the Cattle and Pig Markets :—

Year.	Cattle.	Horses.	Sheep.	Pigs.
1912	4,724	191	399	*11

Compared with last year, this return shows an increase of 29 horses and a decrease of 2,752 cattle, 494 sheep, and 29 pigs.

*These were exhibited at the Christmas Fat Show.

It will be seen that there is a large decrease of animals exposed for sale in the Market, which was entirely due to the many outbreaks of Foot and Mouth Disease during the year.

The figures for the five preceding years are :—

Years.	Cattle.	Horses.	Sheep.	Pigs.
1911	7,476	191	893	40
1910	7,697	151	544	18
1909	7,550	150	1,851	39
1908	8,010	171	2,227	40
1907	8,931	104	1,889	31

VISITS AND INSPECTIONS.

To the Cattle and Pig Markets	202
To the Railway Cattle Siding	103
In connection with Anthrax and Suspected Anthrax Cases	43
To the new pens at the Market for the reception of Irish Pigs	48
Total	396

INHABITED VANS.

These dwellings have been pitched on the Market-ground during the Easter Fair, and on the open spaces at Canterbury-street and Ewood at other times. They have been visited frequently, and the general cleanliness of the vans and their surroundings has been well maintained, particularly those encamped on the Market-ground and Canterbury-street. The tribe at Ewood, consisting of seven vans and two tents, became a source of annoyance to the people in the district, and several complaints were received. The owner of the land was approached, and the vans were removed subsequently. A supply of water has again been provided for the vans on the Canterbury-street ground. The refuse has been removed regularly, and arrangements made for the use of the sanitary conveniences in the neighbourhood.

CANAL BOATS ACTS, 1887 AND 1884.

In compliance with the above Acts, and with the Regulations of the Local Government Board, the Canal has been regularly visited, and 210 boats have been inspected during the year, as compared with 202 in 1911.

Thirteen infringements of the Acts have been detected, namely :—

- Two masters without certificates.
- Four boats in a leaky condition.
- Two boats overcrowded.
- Five boats in a dirty condition.

Six notices have been served, notifying the owners of the infringement of the various clauses of the Local Government Board Regulations, and the necessary work has been carried out.

The overcrowding in two boats caused by having children aboard has ceased. The masters in the five dirty boats were censured.

No infectious diseases were found, and there has been no detention of boats for purposes of cleansing or disinfection.

Two new boats have been registered, and one boat re-registered, through a change of owners, making a total of 85 on the register at the end of the year.

In the 210 boats there were 379 males, 64 females, and 28 children. Twenty-five of the children were under school age, and three were of school age. One of these three was on a holiday trip, and the other two were absentees from school. The Education Authority was notified accordingly.

DESTRUCTION OF FRUIT.

The following unsound fruit has been destroyed during 1912 :—

Pears, 7cwt.
Plums, 5cwt.
Gooseberries, 5cwt.
Tomatoes, 3½cwt.
Strawberries, 30lbs.

SALE OF FOOD AND DRUGS ACTS.

During 1912, 544 Samples were purchased in Blackburn in the administration of the Food and Drugs Acts, of which 440 were samples of Milk.

Of the total number of Samples taken, 469 were found, on analysis, to be genuine.

As in previous years, many unofficial samples were purchased, and if any of these were found to be adulterated, other samples were then taken officially from the same vendors.

The following Tables are of interest as showing the samples taken under the Food and Drugs Acts, and the average composition of milk sold in Blackburn in different months of the year.

Every source of milk supply coming into the Borough from outside districts was sampled, as well as milk from farms within the Borough.

One person was fined 10s. 6d. costs for not having his milk-kit labelled while selling milk in the street.

One person was fined 10s., and 6s. 6d. costs, for not having his milk-kit labelled while selling milk in the street.

One person was fined £2, and 12s. costs, for refusing to sell milk for the purpose of analysis.

The total fines amounted to £40 16s.

Table CVII.—WORK UNDER THE FOOD & DRUGS ACTS.

Articles Purchased.	Number Analysed.	Number Genuine.	Number Adulterated.	Extent of Adulteration.	Action taken.
Milk	440	372	68	3 $\frac{1}{3}$ % deficient in cream.	Informal; a formal sample taken & found genuine.
				10% ,,	Do.
				3 $\frac{1}{3}$ % ,,	Do.
				3 $\frac{1}{3}$ % ,,	Do.
				9% ,,	Fined £2 & 11/6 costs.
				11% ,,	Informal; a formal sample taken & found genuine.
				Slightly watered.	Do.
				4 $\frac{1}{3}$ % deficient in cream.	Do.
				3 $\frac{2}{3}$ % ,,	Do.
				1 $\frac{2}{3}$ % ,,	Warning letter sent.
				41% ,,	Formal sample taken and found genuine.
				20% ,,	Do.
				67% ,,	Do.
				Slightly watered.	Warning letter sent.
				Do.	Do.
				3 $\frac{2}{3}$ % deficient in cream.	Do.
				Slightly watered.	Formal sample taken and found genuine.
				21% deficient in cream.	Informal; a formal sample taken & found genuine.
				7% ,,	Do.
				9% ,,	Fined £2 and 10/- costs.
Carried forward	440	372	68		

TABLE CVII.—FOOD & DRUGS—Continued.

Articles Analysed.	Number Analysed.	Number Genuine.	Number. Adulterated.	Extent of Adulteration.	Action taken.
Brought forward Milk.....	440	372	68	6% added water and 1·1 grains Borates. $2\frac{2}{3}\%$ deficient in cream. 44% " " 5% " " 14% " " 21% " " 6% " " 17% " " 7% " " 1·3 Grains of Borates per pint 8% deficient in cream. 6% " " 5% added water. 6% deficient in cream. 6% " " 8% " " 10% " "	Fined £1 and 10/- costs. Warning letter sent. Fined £5 and 10/- costs. Warning letter. Fined £5 and 10/- costs. Informal; a formal sample taken & found genuine. Warning letter sent. Fined 10/- and 12/- costs. Warning letter. Fined 10/- and 15/6 costs. Fined 40/- and 14/6 costs. Warning letter sent. Informal; a formal sample taken & found genuine. Warning letter sent. Do Informal; formal sample taken & found genuine. Fined 10/- and £3/1/6 costs.
Carried forward	440	372	68		

TABLE CVII. —FOOD & DRUGS—Continued.

Articles Analysed.	Number Analysed	Number Genuine.	Number Adulterated.	Extent of Adulteration.	Action taken.
Brought forward Milk	440	372	68	Slightly watered.	Warning letter sent.
				Slightly deficient in cream.	Informal ; formal sample taken & found genuine.
				Slightly watered.	Do.
				Do.	Do.
				Slightly deficient in cream.	Another Sample taken and found genuine.
				Do.	Do.
				Do.	Warning letter sent.
				Do.	Do.
				Do.	Do.
				Do.	Do.
				Do.	Do.
				5% deficient in cream.	Informal ; formal sample taken & found genuine.
				9% „ „	Fined £5 and 10/- costs.
				7% „ „	Informal; a formal sample taken & found genuine.
				45% „ „	Do.
				8% „ „	Warning letter.
				13% deficient in cream & slightly in solids.	Fined £2 and 12/- costs.
				5% „ „	Warning letter sent.
				9% „ „	Informal; a formal sample taken & found genuine.
Carried forward	440	372	68		

TABLE CVII.—FOOD & DRUGS—Continued.

Articles Analysed.	Number Analysed	Number Genuine.	Number Adulterated.	Extent of Adulteration.	Action taken.
Brought forward Milk.....	440	372	68	<p>Slightly watered. Slightly deficient in cream. Do.</p> <p>Do. Do. Do.</p> <p>18% Do. and 14% added water.</p> <p>3% added water 32% deficient in cream and 16% added water. 4% added water</p> <p>5% deficient in cream. 3% Do.</p>	<p>Warning letter. Do.</p> <p>Informal; a formal sample taken & found genuine. Warning letter. Do.</p> <p>Informal; a formal sample taken & found genuine. Informal sample; a formal sample taken and found genuine. Warning letter. Declared not Milk.</p> <p>Fined 20/- and 10/- costs.</p> <p>Warning letter. Do.</p>
Butter	26	26			
White	11	11			
Pepper					
Bread and Butter	10	8	2	Bread & Margarine	Informal; a formal sample taken & Vendor fined 10/- and 10/- costs.
Ground Ginger	8	7	1	2% of Calcium Sulphate.	Warning letter.
Carried forward	495	424	71		

TABLE CVII.—FOOD & DRUGS—Continued.

Articles Analysed.	Number Analysed.	Number Genuine.	Number Adulterated.	Extent of Adulteration.	Action taken.
Brought forward	495	424	71		
Beer.....	7	-			
Margarine	6	6			
Arrowroot..	4	4			
Baking Powder	3	3			
Coffee	3	3			
Potted Meat	2	1	1	0.1% of Boracic acid per lb.	Informal; a formal sample taken & found genuine.
Jam	2	1	1	1.1 grain per lb. of Salicylic acid.	Warning letter.
Lard	2	2			
Salmon Steak	2	2			
Malt Vinegar	4	4			
Potted Shrimps	1	0	1	0.8% Boracic acid.	Informal; vendor removed.
Castor Oil	1	1			
Pickles ...	1	1			
Sponge Mixture	1	1			
Dandelion & Burdock Stout	1	1			
Golden Syrup	1	1			
Tartaric Acid	1	1			
Cream of Tartar	1	1			
Flour	1	1			
Barley	1	1			
Sardines ...	1	1			
Medicated Beef Mixture	1	1			
Sausages...	2	1	1	0.25% Boracic acid per lb.	Warning letter sent.
Total	544	469	75		

TABLE CVIII.

AVERAGE AMOUNT OF FAT AND NON-FATTY SOLIDS IN THE
SAMPLES OF MILK TAKEN DURING 1912.

MONTH.	Number of Samples.	Average percentage of Fat.	Average percentage of Solids not Fat.
February	52	3'44	8'87
March	56	3'45	8'92
April	51	3'63	8'79
May	46	3'40	9'09
June	53	3'22	9'04
July	55	4'34	9'03
August	17	3'65	9'13
September	40	3'76	9'25
October	38	3'80	9'11
November	22	4'19	9'10
December	9	3'44	9'15
Total	439	3'66	9'04

The average percentage of Fat per sample is 22 above the minimum fixed by the Board of Agriculture, and it is 5 above the average for the year 1911.

MILK SAMPLES BELOW THE MINIMUM CALCULATED AS THE
LIMIT FIXED BY THE BOARD OF AGRICULTURE.

Month.	No.	Amount of fat %	Amount of other solids %	Action taken.
January—No Samples taken through no Public Analyst being appointed.				
February.	7	2.7	8.7	A formal sample taken and found genuine.
		2.90	8.75	A formal sample taken and found genuine.
		2.90	9.10	A formal sample taken and found genuine.
		2.73	9.05	Fined 40s. and 11s. 6d. costs.
		2.67	8.93	Three formal samples taken and found genuine.
		2.87	8.03	A formal sample taken and found genuine.
		2.80	8.61	A formal sample taken and found genuine.
March.	11	2.95	9.2	Another sample taken and warning letter sent.
		1.77	9.55	Two formal samples taken and found genuine.
		2.40	8.70	A formal sample taken and found genuine.
		0.97	8.93	Only 1d. per pint paid, the price of skimmed milk. Another sample taken and found genuine.
		2.97	8.83	Warning letter sent and another sample taken and found genuine.
		3.50	8.40	Warning letter sent and another sample taken and found genuine.
		2.89	8.98	Warning letter sent and another sample taken and found genuine.
		2.37	8.84	Three formal samples taken and found genuine.
		2.77	8.20	Two more samples taken and found genuine.
		2.73	8.87	Fined 40s. and 10s. costs.
		3.40	7.96	Fined 20s. and 10s. costs.
April.	7	2.95	8.70	A formal sample taken and found genuine.
		1.67	9.20	Fined £5 and 10s. costs. Two more samples taken and found genuine.
		3.15	8.35	Another sample taken, warning letter sent.
		2.83	8.51	Another sample taken, warning letter sent.
		2.57	8.91	Fined £5 and 10s. costs. Another sample taken and found genuine.
		2.87	8.98	Another sample taken and found genuine.
		2.35	8.73	Formal sample taken and vendor fined 10s. and 12s. costs.
May.	9	2.80	8.95	Another sample taken and vendor fined 40s. and 14s. 6d. costs. Other samples taken and found genuine.
		2.92	9.38	Another sample taken and found genuine, warning letter sent.
		2.47	9.14	Fined 10s. and 12s. costs.
		2.78	9.30	Another sample taken and found genuine. Warning letter sent.
		2.87	9.03	Another sample taken and found genuine. Warning letter sent.
		2.75	9.09	Fined 40s. and 14s. 6d. costs.
		2.80	8.79	Another sample taken and found genuine. Warning letter sent.
		2.95	9.40	Another sample taken and found genuine. Warning letter sent.
		2.95	9.55	Another sample taken and found genuine. Warning letter sent. Another sample taken and vendor fined £5 and 10s. costs.

MILK SAMPLES—Continued.

Month.	No.	Amount of fat %	Amount of other solids%	Action taken.
June.	7	2·81	8·94	Another sample taken and found genuine. Warning letter sent.
		2·80	9·59	Another sample taken and found genuine. Warning letter sent.
		2·75	9·05	Two formal samples taken and found genuine.
		2·69	8·95	Guarantor fined 10s. and £3 1s. 6d. costs. Another sample taken and found genuine.
		2·90	8·45	Another sample taken and found genuine. Warning letter sent.
		2·90	8·95	Other samples taken and found genuine. Warning letter sent.
		2·85	9·05	A formal sample taken and found genuine. Warning letter sent.
July.	7	2·71	8·90	Fined £5 and 10s. costs.
		2·77	9·10	Another sample purchased and found genuine. Warning letter sent.
		1·65	9·05	Formal samples purchased and found genuine.
		2·76	9·04	Other samples purchased and found genuine. Warning letter sent.
		2·60	8·26	Fined £2 and 12s. costs.
		2·85	9·14	Another sample purchased and found genuine. Warning letter sent.
		2·95	9·35	Another sample taken and found genuine. Warning letter sent.
Aug.	1	2·92	9·33	Another sample taken and found genuine. Warning letter sent.
Sep.	2	2·92	8·08	Another sample taken and found genuine. Warning letter sent.
		2·72	9·33	Formal sample taken and found genuine.
Oct.	2	2·10	7·30	Formal sample taken and found genuine.
		1·71	7·14	The vendor stated that the milk was skimmed milk.
Nov.	1	2·84	8·11	
Dec.	2	2·83	9·35	Another sample purchased.
		2·90	9·50	Warning letter sent.

COMMON LODGING-HOUSES.

In accordance with the Blackburn Improvement Act, 1901, the annual certificates of registration of the premises and of the keepers have been renewed. One new house has been registered, namely, 15, Bent-street, which provides accommodation for 25 adults, and another house has been altered to accommodate 33 adults instead of 25, as formerly. The number of Common Lodging-houses on the register is 27, accommodating 1,101 adults and 17 children. These houses have been visited frequently and regularly, 1,225 visits having been paid to them during the year, and they have been found clean and in good order.

The following is a list of the Common Lodging-houses in the Borough at the present time :—

<i>Situation of Premises.</i>	<i>No. of Rooms.</i>	<i>Accommodation.</i>
19 Larkhill Street.....	41	314 adults
66 Moor Street	20	92 „
3 Syke Street	8	66 „
8 Mount Pleasant	8	65 „
86 to 90 Chapel Street	7	40 „
7 and 9 Daisy Street	2	37 „
104 Mary Ann Street	5	37 „ and 1 child
56 Chapel Street	6	36 „
74 Chapel Street	5	36 „
26 and 28 Penny Street	10	33 „ „ 9 children
54 Syke Street	6	28 „ „ 1 child
39 Tontine Street	4	27 „
13 Birley Street	5	25 „
59 Water Street	5	25 „ „ 2 children
33 Joiners Row.....	4	25 „
145 Birley Street	5	21 „
83 Moor Street	5	21 „
30 and 32 Leyland Street.....	4	20 „
1 Shorrock Street	5	18 „
13 Grimshaw Park	3	18 „ „ 2 children
26 Bradshaw Street.....	3	18 „
33 Larkhill Street	3	16 „ „ 1 child
8 Cowell Street	2	16 „
39 Nab Lane.....	3	14 „
47 „ „	2	8 „
49 „ „	2	12 „
15 Bent Street	3	25 „

HOUSES LET IN LODGINGS.

There are 62 of these tenements on the register; which is the same number as in the year ending December, 1911. Three new such houses have been registered, and three old ones have been struck off. The houses let in lodgings contain 236 rooms, and provide living and sleeping accommodation for 521 adults and 94 children. Weekly inspections have been made of these houses by the district Inspectors, and also frequent visits paid to them by the Chief Inspector during the year. The bye-laws have been well maintained, and there has been no occasion to take legal proceedings. Three thousand one hundred and thirty visits have been paid during the year. As I have said before, annual re-registration of the houses let in lodgings would be a great boon.

COMPLAINTS FROM THE PUBLIC.

Two hundred and seventy-two complaints have been received from the public during the year, and 592 visits have been made for the purpose of ascertaining the cause of such complaints. In all cases where bad smells have occurred through doubtful drainage, a smoke-test has been applied to the drains, and a full report on their condition has been given. The complaints have been promptly investigated, and the necessary action taken for the abatement of the same.

SMOKE OBSERVATIONS OF FACTORIES.

Number of observations of one hour's duration	297
Number exceeding the limit	19
Number of notices served	14
Mechanical stokers provided	7

Four firms were fined £2 and 10s. costs, and ordered to abate the nuisance, during the year.

The following is a list of mills at which observations were made during 1912 :—

TABLE CIX.—SMOKE OBSERVATIONS.

Name of Mill	Result of Observation			No. of Boilers.	If Stokers.	Action taken.
	B.	F.	N.			
Albert, Copy Nook	1	7	52	1	No	
Do.	2	23	34	...	...
Albert, George St. West	3	22	35	1	No	
Do.	1 $\frac{1}{2}$	10 $\frac{1}{2}$	48	...	...
Do.	2	22	36	...	...
Albert, Hall Street	2	14	44	2	No	
Do.	2	13	45	...	...
Do.	4	14	42	...	...
Do.	3	14	43	...	...
Albion Cotton Works	0	14	46	1	No	
Albion	0	20	40	3	Yes	
Do.	0	21	39	...	...
Alexandria	0	13	47	2	No	
Do.	1	16	43	...	...
Do.	3	19	38	...	...
Do.	2 $\frac{1}{2}$	19 $\frac{1}{2}$	38	...	...
Armenia	2	16	42	2	No	
Do.	3	10	47	...	...
Do.	3	24	33	...	...
Do.	3	16	41	...	...
Atlantic	0	22	38	1	No	
Do.	2	21	37	...	...
Do.	2	20	38	...	...
Atlas Works	4	24	32	1	No	
Do.	4	24 $\frac{1}{2}$	31 $\frac{1}{2}$	...	...
Audley Mill	2	14	41	1	No	
Do.	4	14	42	...	...
Do.	2	21	37	...	...
Do.	3	20	37	...	...
Audley Hall No. 1	3	23	34	2	Yes	
Do.	4	10 $\frac{1}{2}$	45 $\frac{1}{2}$	...	...
Do.	3 $\frac{1}{2}$	20 $\frac{1}{2}$	36	...	...
Do.	3 $\frac{1}{2}$	23 $\frac{1}{2}$	33	...	...
Audley Hall No. 2	3	24	33	1	Yes	
Do.	2	11	47	...	...
Do.	4	24	32	...	...
Do.	3	26	31	...	...
Audley Range	3	14	43	1	...	
Do.	3	23	34	...	...
Do.	2	19	39	...	...
Do.	3	27	30	...	...

SMOKE OBSERVATIONS—continued.

Name of Mill.	Result of Observation			No. of Boilers	If Stokers.	Action taken.
	B.	F.	N.			
Audley Range Brick						
Ground	2	26	32	1	No	
Brunswick	0	16	44	1	No	
Do.	4	17	39	...	...
Do.	2	33	25	...	...
Do.	3	20	37	...	...
Bankfield.....	4	7	49	3	Yes	
Do.	0	16	44	...	...
Do.	4	19½	36½	...	...
Bank Top	3	17	40½	1	Yes	
Bastfield ...	2	29	29	2	Yes	
Bastwell Dye Works ...	0	17	43	1	No	
Do.	1	17	42	...	...
Bath	2	18	40	1	No	
Belle Vue	1	10	39	1	No	Fined 40s. & 10s. costs. Mechanical stokers provided
Bridgewater	1	22	37	2	No	
Bright Street	3	18	39	1	No	
Brookhouse (No. 1) ...	2	25	33	5	No	
Brookhouse (No. 3) ...	0	13	47	5	No	
Bridge Mill	0	23	37	1	Yes	Mechanical Stokers provi- ded.
Do.	0	10	50	...	...
Do.	0	20	40	...	...
Boxwood ..	2	20	38	1	No	
Burmah	3	18	39	1	No	
Byrom Street Sawmill..	0	17	43	1	No	
Do.	0	34	26	...	...
Do.	3	23	34	...	...
Canal Foundry (No. 1)	1	21	38	1	No	
Do.	3	19	38	...	...
Canal Foundry (No. 2)	0	20	40	1	No	
Do.	3	20	37	...	...
Do.	4	22	34	...	...
Do.	3	28	29	...	...
Canterbury St. Dye W'ks	0	33	27	2	Yes	
Do. Do.	0	33	27	...	...
Do. Do.	2	23	35	...	...
Do. Do.	1	31	28	...	...
Canterbury Street ...	0	42	18	1	Yes	
Do.	0	18	42	...	...
Do.	3	29	28	...	...
Do.	3	18	39	...	...
Canton	3½	26½	30	1	No	

SMOKE OBSERVATIONS—continued.

Name of Mill.	Result of Observation			No of Boilers.	If Stokers	Action taken.
	B.	F.	N.			
Canton.....	4	22	34	...	...
Cardwell	2	20	38	3	Yes	
Do.	3	21	36	...	...
Carr Cottage	1	19	40	1	No	
Do.	3	20	37	...	...
Chadwick Street.....	2	15	43	1	Yes	
Do.	3	31	26	...	...
Do.	2	13	45	...	...
Chemical Works, Fur- thergate	2	26	32	1	No	
Cicely Bridge.....	4	18	38	3	No	
Columbia	0	8	52	1	No	
Do.	4	15	41	...	...
Do.	1	19 $\frac{1}{2}$	39 $\frac{1}{2}$	...	...
Do.	4	21	35	...	...
Do.	4	23	33	...	...
Commercial	3	14	43	1	Yes	
Do.	3	10	47	...	...
Do.	0	8	52	...	...
Do.	2	19	39	...	...
Do.	4	23	33	...	...
Do.	4	15	41	...	...
Crossfield.....	2	15	43	2	No	
Do.	2	20	38	...	...
Do.	2	28	30	...	...
Do.	2 $\frac{1}{2}$	14	43 $\frac{1}{2}$	...	...
Cecil Street	4	24	32	1	No	
Carlisle Street	2	15	43	1	No	
Crystal Spring Dye W'ks	1	10	49	1	No	
Do.	16	4	40	...	...	Notice served.
Do.	17	8	35	...	...	Fined 40/- & Costs.
Do.	10 $\frac{1}{2}$	15 $\frac{1}{2}$	34	...	...	Proceedings pending.
Dewhurst Street	7	14	39	1	No	Notice served.
Duckworth Field	2	18	40	1	Yes	
Do.	1	17	42	...	...
Do.	2	18	40	...	...
Duke Street	0	21	39	1	Yes	
Eanam Brewery	3	29	28	3	No	
Do.	6	23	31	...	...
Do.	1	19	40	...	...
Do.	3	19 $\frac{1}{2}$	37 $\frac{1}{2}$	...	...
Do.	4	17	39	...	...

SMOKE OBSERVATIONS—continued.

Name of Mill.	Result of Observation			No. of Boilers.	If Stokers.	Action taken.
	B.	F.	N.			
Eanam Brewery	8½	18½	33	Notice served. Smoke apparatus provided.
Eanam Bridge	0	9	51	1	No	
Fernhurst	1	6	53	1	Yes	Notice served. Mechanical Stokers provided
Do.	1	10	49	...	...
Fisher Street	3	43	14	1	Yes	
Florence	2	24	34	1	No	
Fountain	3	17	40	1	No	
Furthergate ...	4	26	30	3	No	
Garden Street	2	18	40	2	Yes	
Do.	1	19	40	...	...
George St. West	2	19	39	1	No	
Gorse Bridge ...	2	25	33	1	Yes	
Greaves Street	4	18	38	1	No	
Gr'nbank Bobbin W'ks	4	13	43	1	No	
Do.	0	10	50	...	...
Griffin	2	19	39	4	No	
Greenbank	8	8	44	1	Yes	
Do.	0	9	51	...	...
Harley Street	2	20	38	1	No	
Do.	3	16	41	...	...
Havelock	3	17	40	1	No	
Haston Lee... ..	0	6	54	1	Yes	
Higher Audley St. No. 1	2	16	42	3	No	
Do.	5	10	45	...	...
Do.	5	20	35	...	...
Do. No. 2	3	20	37	1	Yes	
Do.	3	24	33	...	...
Highfield.....	0	9	51	2	No	
Do.	2	15	53	...	...
Hollin Bank Ring Mill	4	25	31	3	Yes	
Do.	6	17½	26½	...	...
Do.	5	27	28	...	...
Do.	6	23	31	...	...
Hollin Bank Mill.....	0	12	48	1	Yes	
Do.	4	17	39	...	..
Do.	2	17	41	...	...
Hollinshead	0	29	31	1	Yes	
Imperial Mill ...	1	23	36	4	No	
Infirmary	2	21	37	1	Yes	
Do.	4	14	42	...	...
India	4	23	33	2	No	

SMOKE OBSERVATIONS - continued.

Name of Mill.	Result of Observation			No. of Boilers	If Stokers.	Action taken.
	B.	F.	N.			
Johnston Street Waste Works.....	2	24	34	1	No	
Do.	4	19	37	...	...
Do.	2	21	37	...	...
Jubilee	4 $\frac{1}{2}$	25	30 $\frac{1}{2}$	2	No	
Do.	3 $\frac{1}{2}$	21 $\frac{1}{2}$	35	...	...
Limbrick	8	6	46	1	Yes	Fined 4os. & costs.
Do.	2	39	19	...	...	Mechanical Stokers provided.
Leemings Shuttle W'ks	0	14	46	1	No	
Do.	2	25	33	...	...
Mill Hill.....	13	23	34	4	Yes on 2	Notice served.
Do.	11	17	32	...	...	Fined 4os. & costs.
Do.	3	27	30	...	...
Moorbrook	0	16	44	1	Yes	
Moorgate Works	2	20	38	1	No	
Moorgate	7 $\frac{1}{2}$	12 $\frac{1}{2}$	40	2	No	Letter M.O.H.
Mosley	10	18	32	1	Yes	Notice served.
Do.	1	26	33	...	...
Do.	4	20	36	...	...
Moss Street	3	10	47	2	No	
Do.	5	17	38	...	...
Navigation	2	11 $\frac{1}{2}$	46 $\frac{1}{2}$	3	Yes on 1	Notice served.
Do.	8	19	33	...	...
Northgate Rope Works	0	13	47	1	No	
Nova Scotia	1	13	46	2	No	
Do.	0	22	38	...	...
Do.	1	27	32	...	...
Do.	1 $\frac{1}{2}$	20 $\frac{1}{2}$	38	...	...
Novas New Brewery...	3 $\frac{1}{2}$	18 $\frac{1}{2}$	38	1	Yes	
Do.	2 $\frac{1}{2}$	25	34 $\frac{1}{2}$	...	...
Oozebooth	3	16	41	1	Yes	
Do.	13	6	41	...	...	Notice served.
Do.	1	4	55	...	...	Mechanical Stokers provided.
Do.	0	5 $\frac{1}{2}$	54 $\frac{1}{2}$	...	...
Ordnance	2	25	33	3	Yes	
Oxford Waste Works ..	2	15	43	1	No	
Do.	3	16	41	...	...
Palatine ..	8	8	44	1	No	Notice served.
Paradise	3	20	37	2	Yes	
Park Bridge	1	11	48	2	Yes	
Do.	2	22	36	...	...

SMOKE OBSERVATIONS—continued.

Name of Mill.	Result of Observation.			No. of Boilers.	If Stokers.	Action taken.
	B.	F.	N.			
Park Place	3	17 $\frac{1}{2}$	39 $\frac{1}{2}$	3	No	
Do.	5	21 $\frac{1}{2}$	33 $\frac{1}{2}$	...	...
Do.	11	28	21	...	...	Notice served.
Parkside	2	24	34	1	No	
Do.	1 $\frac{1}{2}$	22 $\frac{1}{2}$	36	...	...
Paterson Street.....	3	20	37	1	No	
Do.	3	21	36	...	...
Do.	7	12	41	...	...	Notice served.
Peel	1	11	48	1	Yes	
Plantation	4	4	52	2	Yes on 1	
Do.	2	24	34	...	...
Pump Street	4	17	39	1	No	
Do.	2	15	43	...	...
Do.	3	24	33	...	...
Pioneer	1	18	41	1	Yes	
Prospect	2	20	38	1	No	
Do.	4	28	28	...	...
Quarry Street	6	16	38	3	No	
Do.	0	13	47	...	...
Do.	2	5	53	...	...
Do.	3	22	35	...	...
Randal St. Heald W'ks	2	19	39	1	No	
Do.	0	11	49	...	...
Rockfield	1	11	48	1	Yes	
Roe Lee No. 1	0	13	47	2	No	
Do.	2	19	39	...	...
Rosehill Laundry	3	17	40	1	Yes	
Rosehill	23	21 $\frac{1}{2}$	15 $\frac{1}{2}$	2	No	Notice served.
Rosehill Foundry	4	18	38	1	No	
Royal	0	9	51	1	Yes	
Do.	1	14	45	...	...
Royshaw, No. 1	4	23	33	1	No	
Do.	1	15	44	...	...
Do. No. 2	2	27	31	1	No	
Do.	3	23	34	...	...
Swallow Street	1	27	32	7	Yes	
Do.	0	17	43	...	...
Salford Brewery.....	0	20	40	2	No	
Do.	3	18	39	...	...
Do.	3	25	32	...	...

SMOKE OBSERVATIONS—continued.

Name of Mill.	Result of Observation			No. of Boilers.	If Stokers.	Action taken.
	B.	F.	N.			
Salford New Brewery...	0	25	35	1	Yes	
Do. ...	2	24	34	...	...
Do. ...	3	19	38	...	...
Shakespeare	2	20	38	2	Yes	
Do.	4	18	38	...	...
Do.	2	20	38	...	...
Snig Brook Brewery...	0	19	41	1	No	
Springfield	2	17	41	8	Yes	
Straun	3	23	34	2	No	
Do.	0	9	51	...	...
Do.	4	13	43	...	...
Shaw St. Reed Works	0	26	34	1	No	
Salisbury	2	12	46	1	Yes	
Do.	2	18	40	...	...
Swan Brewery.....	4	20	36	2	No	
Turner Street	2	22	36	1	Yes	
Do.	9	12	39	...	...	Notice served. Mechanical Stokers provided.
Victoria, Mill Hill.....	2	21	37	1	Yes	
Victoria, Hall Street ...	4	21	35	1	Yes	
Do.	2	15	43	...	...
Do.	2	21	37	...	...
Unity, Pearson Street...	1	15	44	1	Yes	
Do.	1	14	45	...	...
Do.	2 $\frac{1}{2}$	23 $\frac{1}{2}$	34	...	...
Do.	2	28	30	...	...
Do.	3	22	35	...	...
Victoria Brewery	0	17	43	1	Yes	
Do.	4	25	31	...	...
Walpole Street	4	27	29	1	No	
Do.	2	19	39	...	...
Do.	2	15	43	...	...
Walpole Street Corn ...	1	13	46	3	Yes	
Waterfall	0	38	22	5	Yes	
Do.	0	36	24	...	...
Waterloo	2	22	36	1	Yes	
Do.	2	22	36	...	...
Wellfield	2	18	40	1	No	
Wellington New	1	20	39	3	No	
Do.	3	15	42	...	...
Do.	4	18	38	...	...

SMOKE OBSERVATIONS—continued.

Name of Mill.	Result of Observation.			No. of Boilers.	If Stokers.	Action taken.
	B	F.	N.			
Wellington Old	2	22	36	1	Yes	
Do.	2	13	45	...	...
Do.	2	21	37	...	...
Wensley Fold New...	3	21	36	1	Yes	
Do.	2	20	38	...	...
Do.	2	18	40	...	...
Do.	1	20	39	...	...
Wensley Fold Old ...	1	19	40	1	Yes	
Do.	4	20	36	...	...
Do.	2	21	37	...	...
Witton	3	19	38	2	No	
Do.	5	25	30	...	...
Whalley Banks	1	8	51	1	No	

DISINFECTION.

Two hundred and eighty-five rooms were washed down with chloros, and 48 rooms were fumigated with formalin gas, at 282 houses after cases of infectious diseases.

Four hundred and eighty-six visits to infected houses were made for the purpose of supplying disinfectants, and 34 typhoid-pails were collected and their contents burnt at the Destructor.

The following articles have been disinfected by steam :—

422	Beds.
261	Mattresses.
311	Bolsters.
565	Pillows.
538	Quilts.
550	Blankets.
323	Sheets.
234	Suits.
229	Carpets.
121	Rugs.
293	Curtains.
1,492	Sundries.

The following articles have been removed to the Destructor and destroyed by consent of owners :—34 beds, 49 mattresses, 9 bolsters, 27 pillows, 4 quilts, 2 blankets, 2 suits, 6 carpets, 1 rug, 2 curtains, and 62 sundries.

56 Library and other books were fumigated during the year.

TABLE CX.

DESCRIPTION OF VISITS.

District—	1	2	3	4	D I	TOTAL
Visits to Common Lodging Houses .....	...	319	166	740	...	1225
Houses let in Lodgings ...	553	539	177	1861	...	3130
Common Yards, Back Roads and Passages ...	4083	2663	1995	3123	...	11864
Infected Houses	78	107	164	59	...	408
Work in Progress	628	1046	1748	1334	1206	5962
Dwelling-houses inspected	368	695	644	439	...	2146
Horse-Manure Middens	399	588	617	748	...	2352
Miscellaneous Visits.....	34	284	48	112	...	478
Nuisances Investigated...	101	125	157	209	...	592
Smoke Observations .....	...	...	...	...	...	297
Chip Potato Shops	1155	166	1051	269	...	2641
Fishmongers and Greengrocers.....	1382	96	724	173	...	2375
Cowsheds and Dairies ...	39	44	43	41	...	167
Schools .....	...	36	45	...	...	81

TABLE CXI.

DESCRIPTION OF NOTICES ISSUED AND NUISANCES REMEDIED.

District—	1	2	3	4	D.I.	Total.
Preliminary Notices served	316	315	388	337	30	1386
Legal „ „	20	58	122	78	1	279
Letters from M.O.H.	5	111	73	52	223	464
Examination of Drains—						
By Water.....	...	...	...	...	684	684
„ Smoke .....	...	...	...	...	801	801
„ Coloured water for leakages.....	...	...	...	...	155	155
„ Breaking down .....	...	...	...	...	189	189
Nuisances remedied from—						
Defective Drains	13	33	13	8	...	67
Choked „	24	57	30	81	10	202
Defective Water Closets	18	20	28	19	...	85
„ Pail „	40	6	34	50	...	130
„ Slop Water Closets	19	2	14	3	6	44
„ Trapped Gullies.....	4	9	11	3	321	348
„ Sink Waste Pipes	64	33	43	30	93	263
„ W.C. Cisterns and Flushing Fittings	46	47	16	40	53	202
„ Urinals .....	...	...	...	...	...	...
„ Easing Troughs and Down Spouts.....	103	58	46	49	124	380
„ Soil Pipes .....	...	...	...	...	15	15
„ Gully Dishstones	14	30	8	19	330	401
Improper Drainage .....	...	14	10	5	220	249
Inspection Chambers provided.....	...	...	...	...	36	36
Sink pipes connected to drain .....	...	...	1	...	...	1
Yards unflagged .....	...	20	25	22	45	112
Cellars „ .....	...	2	...	...	...	2
Yards badly paved or flagged	86	31	31	19	107	274
Houses overcrowded	2	3	4	6	...	15
Houses, Yards, Closets, and Cellar Areas in filthy state.....	6	51	65	38	...	160
Damp and defective house walls, roofs, etc.	97	63	28	207	...	395
Insufficient Ventilation of Rooms	166	15	89	96	...	366
Defective Manure Middensteads .....	...	1	1	5	...	7
Accumulations of Manure	399	541	639	748	...	2327
„ Offensive Matter .....	...	27	...	4	...	31
„ Stagnant Water	1	6	10	...	...	17
Dwelling-houses whitewashed.....	182	71	107	185	...	545
Poultry and Erections in yards removed ...	8	1	2	3	...	14
Low Chimneys raised.....	1	...	1	...	...	2
Ash Tubs provided or repaired	86	34	70	87	...	277
Ash Pits and Pail Receptacles repaired	7	6	25	29	...	67
Street Gullies, Ash Pits, &c., reported to Cleansing Department .....	...	183	2	24	...	209
Pail Closets converted to Fresh Water Closets .....	...	23	24	1	16	64

Causes of Death in the County Borough of Blackburn during the Year 1912.

[illegible]

[illegible]

[illegible]

[illegible]

AGNES

CAUSE OF DEATH.	AGES															All Ages		Total
	0 to 1	1 to 2	2 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwds	M	F	
94 (a) Pulmonary Apoplexy and Infarction	1
(b) Pulmonary Oedema and Congestion
(c) Hypostatic Pneumonia
(d) Collapse of Lung (3 months and over)
95 Gangrene of Lung
96 Asthma
97 Pulmonary Emphysema
98 (a) Fibroid Disease of Lung
(b) Other Diseases of the Respiratory System
99 (a) Diseases of the Teeth and Gums
(b) Thrush, Aphthous Stomatitis
(c) Parotitis
(d) Other Diseases
100 (a) Tonsillitis
(b) Ludwig's Angina
(c) Other Diseases of the Pharynx
101 Diseases of Esophagus
102 Perforating Ulcer of Stomach
103 (a) Inflammation of Stomach
(b) Other Diseases of Stomach
104 and 105 (a) Intestive Enteritis
(b) Diarrhoea, not returned as infective
(c) Enteritis, not returned as infective
(d) Gastro-Enteritis, not returned as infective
(e) Dyspepsia, under 2 years
(f) Colic
(g) Ulceration of Intestines
(h) Duodenal Ulcer
106 Ankylostomiasis
107 Other Intestinal Parasites
108 Appendicitis
109 (a) Hernia
(b) Intestinal Obstruction
110 Other Diseases of the Intestines
111 Acute Yellow Atrophy of Liver

[illegible]

CAUSE OF DEATH.	AGES.															All Ages		Total
	0 to 1	1 to 2	2 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 60	60 to 65	65 to 75	75 to 85	85 and upwds	M	F	
183 Homicide by Cutting or Piercing Instruments	1	..	..	..	..	..	..	..	..	..	..	..	..	1
184 Homicide by other means
185 Fractures (cause not specified)
186 Other Violence	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	2
187 Dropsy
188 (a) Syncope (aged 1 year and under 70)
(b) Sudden Death (not otherwise defined)	1	..	..	..	..	..	..	..	..	..
189 (a) Heart Failure (aged 1 year & under 70)	1	..	..	2	2	9	2	5	8	1	..	..	2	3
(b) Atrophy, Debility, Marasmus (aged 1 year and under 70)	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	14	30
(c) Teething	1
(d) Pyrexia
(e) Other ill-defined deaths	1	..	..	..	1	2
(f) Cause not specified	1	..	..	..	..	..	..	..	..	..	2	..	..	..	..	2	1	3
Totals	327	88	69	27	22	40	40	120	165	213	147	164	331	156	19	950	978	1928

APPENDIX C.

[illegible]

LOCAL GOVERNMENT BOARD.

TABLE I.—Vital Statistics of Whole District during 1912 and Previous Years.

Name of District: BLACKBURN.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.†		NETT DEATHS BELONGING TO THE DISTRICT.					
		Un-corrected Number.	Nett.	Number.*	Rate.	of Non-residents registered in the District. †	of Residents not registered in the District. †	Under 1 Year of Age.		At all Ages.			
								Number.*	Rate.	Number.*	Rate.		
1	2	3	Number. †	4	5	6	7	8	9	10	11	12	13
1907	131600	3348		25.4	2352	17.8	104	45	5.8	151.7	2293	17.4	
1908	131986	3415		25.8	2236	16.9	120	41	5.10	149.3	2157	16.3	
1909	132373	3139		23.7	2333	17.6	127	28	4.02	127.4	2234	16.8	
1910	132760	2948		22.2	2075	15.6	159	33	4.01	136.0	1949	14.6	
1911	133149	2857		21.4	2242	16.8	123	30	5.34	186.9	2149	16.1	
1912	133539	2741	2737	20.4	1988	14.8	118	58	327	119.4	1928	14.4	

NOTES.—This Table is arranged to show the gross births and deaths in the district, and the births and deaths properly belonging to it, with the corresponding rates. For years before 1911 some of the corrected rates probably will not be available. The rates should be calculated per 1,000 of the estimated gross population. In a district in which large Public Institutions for the sick or infirm seriously affect the statistics, the rates in Columns 5 and 13 may be calculated on a nett population, obtained by deducting from the estimated gross population the average number of inmates not belonging to the district in such institutions.

* In Column 6 are to be included the whole of the deaths registered during the year as having actually occurred within the district.

In Column 12 is to be entered the number in Column 6, corrected by subtraction of the number in Column 8 and by addition of the number in column 9. Deaths in Column 10 are to be similarly corrected by subtraction of the deaths under 1, included in the number given in Column 8, and by addition of the deaths under 1 included in the number given in Column 9.

† The Medical Officer of Health will be able from the returns made to him by the local Registrar of Deaths, as well as from the quarterly lists furnished by the Registrar General, to fill in Column 8 in accordance with the rule in next paragraph below. The Registrar General, either directly or through the County Medical Officer of Health, will supply the Medical Officer of Health with the particulars of deaths to be entered in Column 9; and all such deaths must be included in this Column, unless an error is detected, and its correction has been accepted by the Registrar General. For Column 4 the Registrar General will furnish to the Medical Officer of Health, a statement of the number of births needing to be added to or subtracted from the total supplied by the local Registrar.

‡ “Transferable Deaths” are deaths of persons who, having a fixed or usual residence in England or Wales, die in a district other than that in which they resided. The deaths of persons without fixed or usual residence, e.g., casuals, must not be included in Columns 8 or 9, except in certain instances under 3 (b) below. The Medical Officer of Health will state in Column 8 the number of transferable deaths of “non-residents” which are to be deducted, and will state in Column 9 the number of deaths of “residents” registered outside the district which are to be added in calculating the nett death-rate of his district.

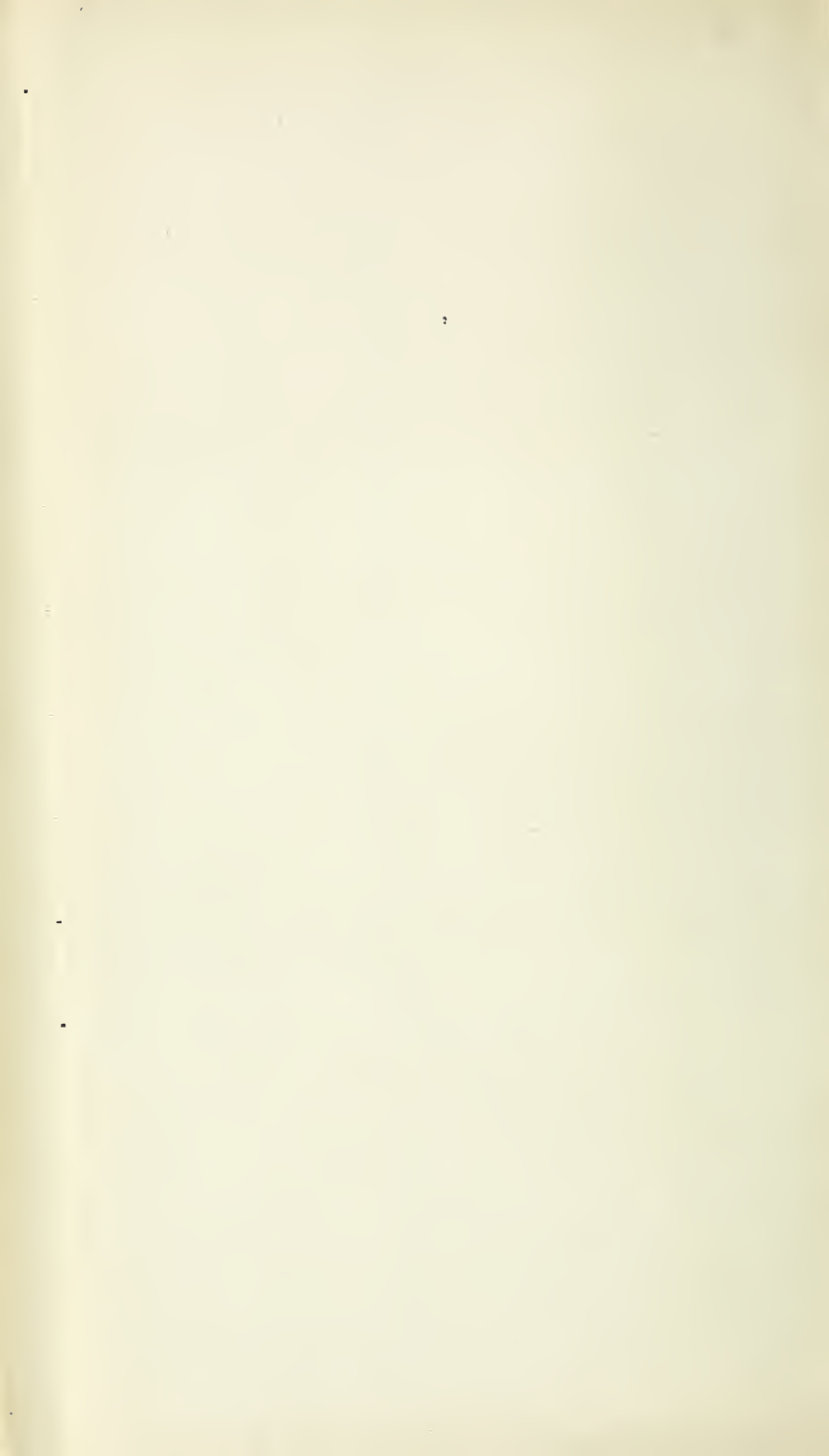
The following special cases arise as to Transferable Deaths:—

(1) Persons dying in Institutions for sick or infirm, such as hospitals, lunatic asylums, workhouses, and nursing homes (but not almshouses) must be regarded as residents of the district in which they had a fixed or usual residence at the time of admission. If the person dying in an Institution had no fixed residence at the time of admission, the death is not transferable. If the patient has been directly transferred from one such Institution to another, the death is transferable to the district of residence at the time of admission to the first Institution.

(2) The deaths of infants born and dying within a year of birth in an Institution to which the mother was admitted for her confinement should be referred to the district of fixed or usual residence of the parent.

(3) Deaths from Violence are to be referred (a) to the district of residence, under the general rule; (b) if this district is unknown, or the deceased had no fixed abode, to the district where the accident occurred, if known; (c) failing this, to the district where death occurred, if known; and (d) failing this, to the district where the body was found.

Area of District in acres (land and water)	7418	Total population at all ages	133,052	At Census of 1911.
		Number of inhabited houses.....	30,648	
		Average number of persons per house	4.3	





CHURCH

BLACKBURN.

REGISTRATION SUB-DISTRICTS.

Typhoid Infected Houses •



